



Rebuilding

B R I T A I N

#6
AS 15

W. G. DeLong
Oct. 1944

Rebuilding Britain

Published for THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

LUND HUMPHRIES 12 Bedford Square, London, W.C.1

CONTENTS

	Page
INTRODUCTION	3
REBUILDING BRITAIN	7
WHAT CAN YOU DO?	64
SOME ACCOUNT OF THE WORK OF THE RECONSTRUCTION COMMITTEE OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS	68
LEGISLATION—PRESENT AND FUTURE	70
LEGISLATION—THE PART OF THE ARCHITECT	72
THE SCALE OF RESPONSIBILITY	73
ARCHITECTURE AND THE BUILDING INDUSTRY	75
BUILDING METHODS	77
A LIST OF BOOKS	78

ACKNOWLEDGMENTS

* <i>Architectural Press</i> Nos. 25, 29, 32, 40, 41, 43 (block lent), 44 (block lent), 48, 51, 52, 53, 63, 64, 65.	<i>G. P. Abraham Ltd.</i> No. 47.
* <i>British Council</i> Nos. 21, 24, 37, 38, 54, 57.	<i>Gabrielle Buckley</i> No. 7.
* <i>Collins & Birkett</i> No. 17.	<i>Fox Photos Ltd.</i> Nos. 1, 19, 28, 42, Tailpiece.
* <i>Hulton Press Ltd. (Picture Post)</i> Nos. 18, 23.	<i>Gaumont-British Instructional Ltd.</i> Nos. 2, 3.
* <i>Illustrated London News</i> No. 58.	<i>Stephen Glass</i> Nos. 6, 33.
* <i>Ministry of Information</i> . . Figures on cover (<i>U.S. Army Signal Corps.</i>) and p. 63.	<i>Germaine Kanova</i> No. 39.
* <i>Swedish Legation</i> Nos. 30, 61.	<i>A. F. Kersting</i> No. 36.
* <i>Frank Yerbury</i> No. 62.	<i>Keystone Photographic Agency</i> Nos. 14, 49.
	<i>London News Agency Photos</i> No. 4.
	<i>W. Suschitzky</i> Nos. 6, 10, 20.
	" <i>The Times</i> " Aerial View on Cover.
	<i>Edith Tudor-Hart</i> No. 22.

*Especial acknowledgments are expressed to those marked with an asterisk for the free and generous use of photographs.

Published February 1943 on the occasion of the Exhibition at the National Gallery, London, Rebuilding Britain, organised by the R.I.B.A. and sponsored by the Building Industry.

MADE AND PRINTED IN GREAT BRITAIN BY
PERCY LUND, HUMPHRIES AND CO. LTD
12 BEDFORD SQUARE, LONDON, W.C.1
AND AT BRADFORD

Introduction

Help Yourself to Reconstruction

Every man and woman in Britain can lend a hand in the national task of reconstruction, and they can equip themselves now for helping with the job. They can find out what needs doing and how well it could be done, and then they can take action. The object of this book is to show how we could rebuild Britain. Opportunities past and present are scrutinised, some of the available solutions to the problem are reviewed; and the various aspects of the subject can be followed pictorially. An account of some work that has already been done to prepare the way for rebuilding follows the illustrations.

There are two sorts of expert: negative and positive: those "who know what can't be done," and the others. Fortunately for the science, industry and commerce of this country, the positive type has generally predominated. The technical skill, knowledge, and imagination of specialists are useless when applied to a national problem as urgent and as intimate as rebuilding, unless they are supported and encouraged by the people. That support can be effectual only if men and women all over the country make themselves as well-informed as possible now, about the problem of reconstruction in relation to building. That is the individual obligation imposed by the national opportunity. People must help themselves to reconstruction.

Abundant skill exists. The architectural profession has already marshalled its technical resources, and has put them at the disposal of the community.

In March 1941 the Royal Institute of British Architects formed a Reconstruction Committee. Upon its formation, the Institute submitted

to the Minister of Works and Buildings a memorandum, in which it was pointed out that:

"The training and practical experience of the qualified architect bring him into contact not only with the design of buildings, but with major and ancillary problems connected with it. Town-planning, transport, planning for industry, housing, finance, legal questions, organisation, and administration of projects of construction are all matters which become daily familiar to architects with extensive practices. For the practice of architecture to-day is not confined solely to plan and elevation, still less to transforming works of practical building into ordered architectural coherence. The qualified architect is a man conversant with those same factual problems of broad aspect which confront a Minister of Works and Buildings, a Minister of Planning, a Minister of Reconstruction."

The memorandum also stated that:

"The policy of the Royal Institute of British Architects towards post-war planning and building is based on its long experience of ordered and effective approach towards problems of this kind. This experience leads conclusively to a few simple but important directives. Amongst these are the necessity (a) for policy to precede planning; (b) for planning to precede execution; (c) for work to be both conceived and executed through full utilisation of the trained technical skill of the professional and trade elements which comprise the building industry, and in accordance with a procedure the practical value of which has been proved by decades of experience.

"The Royal Institute considers that architects are a vital part of the building industry, that its architect members form a learned society within this industry, through the nature of their training and calling, but that they remain fully cognisant of their role as creative working members of a great industrial community."

In setting up the Reconstruction Committee, the R.I.B.A. organised the specialised knowledge of the profession, and made it readily available. The Committee created groups of specialists to consider specific aspects of the problem, and these groups dealt with: Policy; Planning and Amenities; Housing; Building Legislation; Building Technique; Architecture and the Building Industry; Professional Status and Qualifications; and finally with Public Relations.

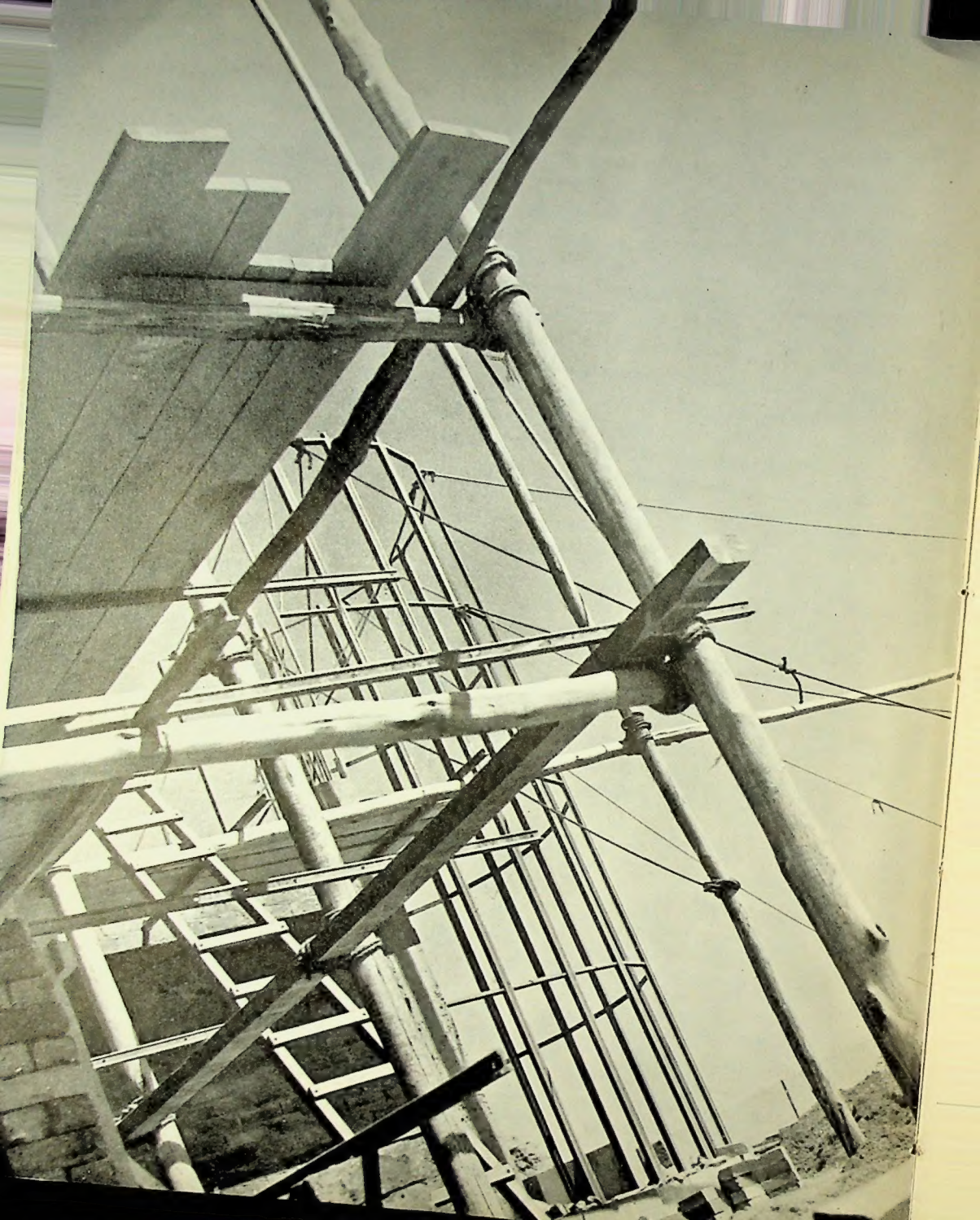
Inevitably, in their examination of what exists and what could exist, the groups of the R.I.B.A. Reconstruction Committee had to appraise critically a good many beliefs that have hitherto been generally accepted. They found not only that alterations to existing building regulations were

desirable; they also found themselves asking all manner of questions, and suggesting answers that affected the social and political structure of society; but after facing these relevant matters, and recording their significance, they did their work as architects, intent on better building, and the working out of a lucid and satisfying replanning programme that must precede the rebuilding of Britain.

A condensed account of some of the ideas and suggestions of the R.I.B.A. Reconstruction Committee begins on page 68. The views of the Institute may help the public to clarify its own views, to think clearly about what it wants. But only the men and women who compose the British public can choose what they want; they alone can determine the shape and scope of reconstruction. One of the war posters portrays Mr. Churchill, saying: "Deserve Victory!" Victory may be achieved by effort, sacrifice, and vision. Reconstruction makes similar demands. The people of Britain will get the reconstruction they deserve.

The Royal Institute of British Architects

The Institute was founded in 1834, and the first Royal Charter was granted by King William IV in 1837. It has some 11,000 members in Great Britain, and a network of allied societies throughout the British Commonwealth. Its headquarters are at 66 Portland Place, London, W.1.



Rebuilding Britain

BRITAIN IS ALWAYS BEING REBUILT. Buildings fall into decay, or become unsuitable for their purpose, and are replaced by new ones. Industries die down, and the homes that housed their workers become slums and are demolished. New industries spring up in other places, and new houses are built to serve them. Some towns prosper; they attract more and more people, and grow bigger with startling rapidity; other towns fall on hard times, know hunger and unemployment, become redundant.

The countryside, too, is always being rebuilt. More slowly, and therefore less perceptibly sometimes, but it changes all the same. In some areas it changes as rapidly as the towns, and then we all cry out that it has been ruined. In other areas the changes seem small; a cottage disappears and a new one takes its place; a farmhouse becomes a tea-shop, and near it a filling station appears.

Constantly the face of Britain alters, although, like our own face in a mirror, we may not notice it day by day. Man's surroundings alter because he makes them in order that they may serve him. They are a reflection of man and of his changing ways of life.

The Effects of Industry

The built-up areas of Britain have grown and spread during the last hundred years. Industry expanded, wealth was created, and a vast body of technical knowledge accumulated; for steam power, which had been used extensively for pumping engines in the eighteenth century, was applied to manufacture in the nineteenth, and large factories became possible. Coal mining and heavy industry were developed, railways spread their network from port to port and between the towns, Britain was first in the market and trade expanded. Power production brought increasing



1



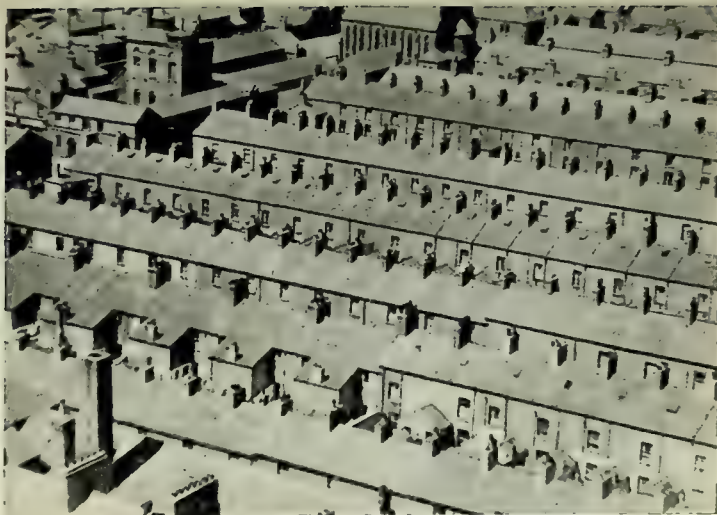
2

Factories and houses, smoke, dirt and few open spaces. It is convenient to live near one's place of work, but these two examples from the Midlands show how unpleasant it can be. They are typical of our industrial towns, but many are much worse than this.

numbers of men into cities, factories and dwellings sprang up cheek by jowl, and the population leaped in numbers.

Houses were needed in hundreds of thousands. They were run up like rabbit hutches, packed as closely as a hasty ingenuity permitted and strung along narrow roads. They were built without regard to the welfare of their occupants or their neighbours. The civilised tradition of the eighteenth century, with its finely laid-out streets and squares, its trees

In the nineteenth century mile upon mile of Britain was covered with monotonous and lifeless dwellings like these.



3

and green spaces—a tradition that, although evolved for and by the wealthy, influenced the general character of English towns—went by the board. Towns soon became murky and congested, and those who could afford it moved outside where they could spread themselves. But for most of the people there was no alternative; they were trapped in the smoky man-made inferno, bound by their wages to drab joyless houses or disease-ridden slums. There they worked, if they were fortunate; and there they died, often prematurely and miserably.

As the nineteenth century wore on, those who had fled became engulfed again in the expanding city. Around them crept the sea of bricks and macadam. Once again those who could afford it played leap-frog into the country, and so it went on, in ring after ring. The cities became choked, grossly overburdened with their weight of humanity and transport; it took hours to get into them, hours to cross them, hours to emerge at the other side. New roads were made around them, arteries sprouted from them away into the country; but here again came buildings, in seedy frills along the road.

This great and uncontrolled growth of built-up Britain is deplorable not just because it is ugly and unworthy of the genius of a country that had the skill and inventiveness to lead the world in industrial development, but because it does not provide a framework in which people can lead full and happy lives. We have not merely put a blight on our landscape, we have put a blight on ourselves.

The War and Rebuilding

September 1939 marked the beginning of a breathing space, for when civil building was stopped to make way for more urgent war-time needs, our towns stopped expanding. And when bombs began to fall a year later, our towns began to shrink. Congested central areas were transformed into open spaces, gaps appeared everywhere, whole quarters became derelict.

Rebuilding is inevitable; it is not a dream. We have lost millions of cubic feet of shelter, in one form and another, and in addition to this we shall find ourselves at the end of the war with a great deal of leeway to make up on our normal pre-war rate of replacement and rehousing. It is estimated that one out of every five buildings in Britain has been damaged in some way, and millions of new houses will be needed as quickly as they can be provided.

Although bomb damage has focused popular attention on the possibilities of replanning our towns (and indeed urban rebuilding will be the major task), towns cannot be considered independently of the countryside. And the countryside itself raises special problems if we mean to maintain, and improve, the healthier state of agriculture which the war has forced us to organise, and if we hope to prevent the rural population drifting wholesale to the urban centres as it did in the years before the war.

4





5



6

Make Do and Mend?

Are we going to make this necessary rebuilding an opportunity for real replanning, for creating in Britain more of the delights and advantages that urban living can provide, and of balancing these with a healthy and productive countryside? *Or* are we going to patch up our ruins higgledy-piggledy, with some architectural finery here and there, and say that is the best we can do, and that anything more would prove too difficult and too drastic? The experts can explain what could be done; but what do you and your neighbours want? Ask the woman next door, ask the soldier, the munition worker, the farm worker and the bus conductor. They may not be clear about which sort of rebuilding they would like, but they do want something homely and human, something that gives comfort and



7

The people on this page are not experts in building and planning, but they know something about their own needs. It is up to them, and to all of us, to express our needs; and it is up to the experts to make sure that they don't forget for whom they are planning.

privacy; though they may say wryly that they don't know whether it will be given them. Others will be more determined, and say they are jolly well going to see that they get it. The more people are determined about it, the better our chances will be of doing something about it. Some of the ways in which people can inform their ideas and express their determination are suggested at the end of this book.

If we are going to be determined about getting something genuinely better than we have had before, we need to be clear in our minds about what sort of things are important. We don't need to be able to suggest plans in detail at this stage; but we do need to know something about the extent of the problem and what standards the plans should satisfy when they are eventually worked out. We do need to know what sort of possibilities there are, and to realise what advantages those possibilities could give us in the way of pleasanter and healthier lives.

This section of the book gives, in a simple way, some general principles to have in mind when we are thinking about rebuilding. About most of these principles there is probably general agreement, although some of them may not meet with everybody's approval. Still, they are not put forward as rules, but as suggestions. The conclusions to which these principles lead us may seem at first to be rather ambitious, but timidity would be useless, particularly at the outset. The men who flung the railways across the length and breadth of Britain, and who developed British industry, were nothing if not enterprising, and to-day Britain at war has shown herself capable and ready to take her courage in both hands and organise on a big scale.

Where Planning Begins

What are our needs? What are the first things we want our post-war Britain to provide in the towns and in the country? Surely they are these: good conditions in our homes and places of work, convenient transport between them, and good accommodation for education, for health services, and for our leisure occupations and entertainments. These are the fundamental things that affect us. Obtaining them depends on much more than town planning and buildings, of course, for they are conditions that can only be created by a healthy and democratic society, and before we can expect to achieve them we shall have to see that our society is working in a way that does not impede them. Talk about a glorious rebuilding is easy, but it means very little unless it is thought of as a part of something much wider.

The conditions for a wider reconstruction exist, and there are few who do not earnestly desire it. This is not the place to discuss the issues, but

it is clear that a better Britain depends upon our organising it, and not on just leaving it to chance. It cannot be achieved without planning and control, just as the war cannot be won without these things. Social planning is the first requirement without which it is idle to hope for physical planning and a progressive rebuilding policy. Given this social planning, the first requirement of rebuilding is that it, too, should be organised nationally, for clearly the big questions of industrial and agricultural policy, the reservation of certain areas for industry and others for agriculture, and the planning of transport routes to serve them, will affect our decisions about the replanning of the individual parts.

A National Plan

Supposing we do plan on a national scale, at what sort of a Britain should we aim? Disregarding for a moment the practical difficulties of transforming the whole man-made pattern of the country, would it be sensible to do away with our great cities, and for all of us to live in small and pleasant communities dotted evenly all over the map? Would it be possible to go a step further even than this, and to do away altogether with communities as we understand them, and taking advantage of the possibilities of rapid transport on land and in the air, and of the instantaneous communication that radio and television might provide, to redistribute the whole population in small houses, each surrounded by its own acre or so of land, so that Britain became one great garden city? The answer to these questions is not to be found in our own hearts, for factors are involved which are more fundamental than our personal aspirations and preferences, and which are embedded deep in the economic life of the whole island. We can answer these questions only by looking at the pattern of Britain as it is to-day, understanding the reasons why that pattern is there, and whether, in general, it is an appropriate one, and whether the conditions that produced it are likely to continue in the future.

The Industrial Core

The main centres of industry in Britain form a broad core that stretches from London to Liverpool, and then bends away up to Newcastle. Another pool of industrial activity lies on the Banks of the Clyde. In these areas lie the basis of our economic life, and upon it Britain's position in the world depends. Here also are our main great urban populations, and the unhealthy and inconvenient towns in which they live and work. But the industries around which these areas have formed are situated where they are mostly for good reasons: they extract things from the earth, they are near big ports, or they lie on convenient transport routes between



The main industrial areas of Britain are shown in black on this map. The white area bounded by the dotted line contains Britain's main industrial core, which has developed along and around the London to Liverpool line of communication. Most of the industries in this core are there for good reasons, and will probably stay where they are so long as Britain's economic position in the world remains fundamentally unchanged.

other industries with which their processes are linked. And while Britain remains in the world picture as an important industrial country, most of these industries must necessarily stay where they are. On the other hand, some of the lighter industries are not so tied to particular places, and in the recent past have sprung up in many areas which might have been better used for other purposes—they have stolen good agricultural land, for instance, or have spoiled open spaces that should have been reserved for the delight of people seeking recreation. Opinions about what should be done in the future about these industries vary between keeping them attached to our existing industrial areas, and, on the other hand, decentralising them, which means letting them grow up in new places, and thus forming new communities and even altogether new towns, some of them combined, perhaps, with existing agricultural centres.

If our agriculture is to prosper, any wholesale decentralisation of light industries is out of the question, and probably the solution lies in



Some factories are good to work in and good to look at. Light industries, particularly, need not spoil the countryside if proper care is taken to plan them and their surroundings, as this Swedish factory shows.

centralising, in the main, only those industries whose products depend on farm and market-garden produce, or which serve the special needs of rural work and living. But whatever the solution is, it is clear that nothing is to be gained by letting things go their own sweet way, and that before we can properly tackle the problem of replanning our towns and cities—or our villages—we need a skeleton plan on the national scale which can direct the main lines of development and preservation throughout the length and breadth of the country, and that if such a plan is to be effective it must be made compulsory to adhere to it.

It is also clear that whatever pattern this skeleton may take, our main industrial core will stay put, along with many other isolated industrial centres outside it; and that if agriculture is to be seriously considered as a part of our national life, the location of industry in rural areas will be much restricted, and that we must therefore allow for still more expansion of industry in the existing centres.

Let us look first at these inefficient urban agglomerations, for they are really our main problem. Before the war eight out of every ten people in Britain lived in towns, and half of these people were in the great urban areas which centre on such cities as London, Birmingham, Glasgow, Liverpool, and Manchester. Perhaps not so many will live there after the war, but many *will* remain, all the same. Somehow we have to find a way of bringing decent living conditions back into these places. This must be the aim of our town planning.

The East End of London. Good, solid, sanitary building, perhaps, and a real improvement on existing standards at the time it was built. By no means the worst example to be found. But it is no sort of a place for people to live in, particularly when it is surrounded with miles of similar streets and buildings. It is little better than an open-air prison, and besides being unhealthy, thwarts the opportunity for a full and happy life.



10

The Problem of the City

A lot of thought has already gone to the problem of the city, in the attempt to work out what sort of pattern it should follow if it is to be a satisfactory place for modern man. Planners have seen that the new conditions of industry and transport, and the need for general social welfare, make it necessary to think again from first principles if a real solution is to be found. It will be useful to examine some of the attempts they have made, and to see how they have gone about the problem. And as it is a problem that has occurred all over the world, and the thinking has, in a way, been international, we will follow the main development of thought from its beginnings in this country in the nineteenth century, through France, and back to this country again.

Early in the nineteenth century there were in England a number of idealists who dreamed of creating new and better forms of social life. Some of them rejected industrialism, and the values that it had created, and believed in a return to something like mediæval communities, where men could again take a joy in their work. Others saw industry as a step forward, but believed that a new form of economic organisation was necessary if we were to use it fully for the welfare of man; these were the Utopian Socialists, men like Robert Owen, who tried to found new communities. They succeeded in beginning them, but the rest of the world went by in its own way, unaffected by them; and the new communities died out.



11

Early in the twentieth century two garden cities were begun in England, the first at Letchworth and the second at Welwyn, both about thirty miles north of the centre of London. Their plans are not like the one that Howard originally suggested, being much more informal in character, but the principles on which they are based are fundamentally the same. The photograph above is of Parkway, Welwyn Garden City, and shows the public gardens in the centre of the town.

gardens. Nevertheless, planners who believe in the garden city and the satellite town represent a definite school of thought to-day. Briefly, they don't agree with big cities at all, claiming that towns should be of a size that makes possible a full measure of social life, but not any larger, and that they should contain a healthy balance of industry and housing, and should be surrounded by a rural belt.

Satellite towns may be a method of dealing with a certain amount of expansion of existing cities, or of rehousing a limited number of people from the central areas of those cities, but they clearly do not solve the crucial problem of the city itself. However satisfactory they may be in themselves, they are only a palliative to this central disease. Obviously it is impossible for us all to move out into satellite towns and leave the city empty, and even if we could do this we should sacrifice a lot of the communal advantages that the great city, for all its faults, undoubtedly gives us. If we are really going to tackle the replanning of the city at all, we may be able to find a way of dealing with it that makes the satellite remedy redundant.

An Industrial City

Some planners have accepted the big city, and shown how, in their opinion, it could be made a perfectly good place to live in, and how it could even be allowed to expand still further without getting choked up.

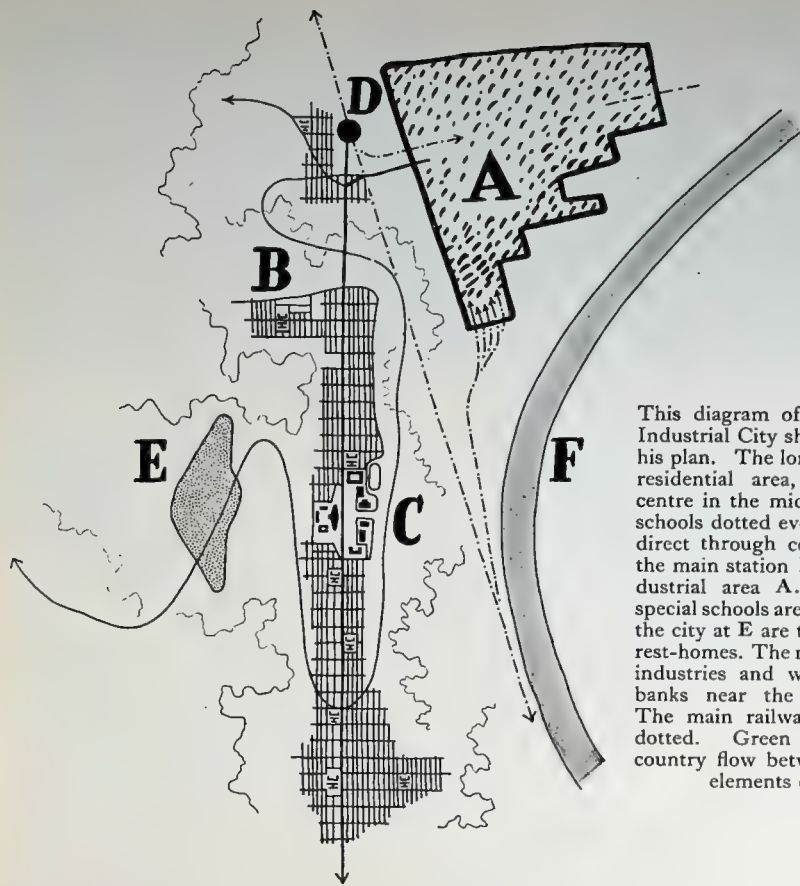
A man who thought this way was Tony Garnier. He was a Frenchman, and he must have been working at his scheme for an "industrial city" at the time Howard brought out his arguments for garden cities, although it was not until 1917 that his work was fully published in a book. His scheme represents a big leap in thought, and contains the germ of much modern town-planning theory. Although his city was designed for about the same number of inhabitants as Howard had in mind for his garden cities, he made allowance for its possible growth, and did not put it in a strait-jacket.

He planned his industry clear of the rest of the town, separated from it by a green belt, and had good traffic communication between the two. The town proper was a long oblong shape, with the main road artery running through it like a spine. In the middle of this spine was the civic centre, and along both sides were the housing, shops, and schools, planned to take full advantage of sunlight on a rectangular grid of roads spaciouly laid out amongst lawns and trees. Heavy traffic was isolated from the residential roads.

Unlike his predecessors, Garnier broke away from the Renaissance ideas of fine planning—the radiating avenues and great vistas lined with buildings that in some ways had been the limit of even Ebenezer Howard's vision, and which still, to this day, exert a considerable influence on many planners. He separated the various functions of the town, the industry, the housing, the leisure, and the transport, and planned accordingly. The planners who came after him owe a great deal to his clear thinking.

One of Tony Garnier's drawings of part of the residential area of his Industrial City, showing the feeling of seclusion from the main traffic roads.



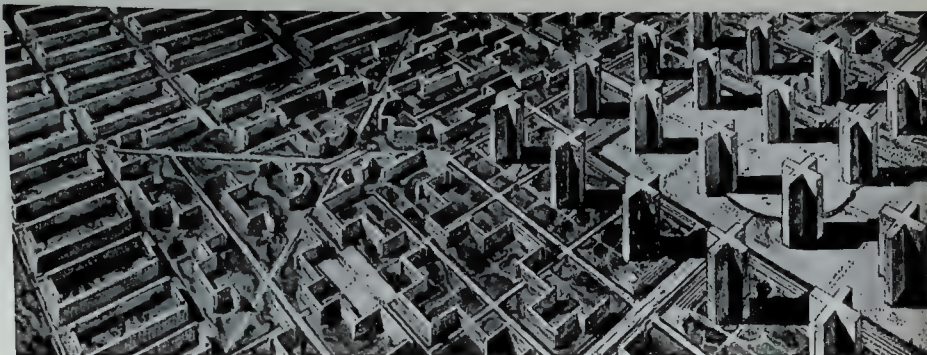


This diagram of Tony Garnier's Industrial City shows the bones of his plan. The long gridiron of the residential area, with the civic centre in the middle C, and the schools dotted evenly about it, has direct through communication to the main station D, and to the industrial area A. Technical and special schools are at B, and outside the city at E are the sanatoria and rest-homes. The river F has certain industries and wharves along its banks near the industrial area. The main railway line is shown dotted. Green belts of open country flow between the various elements of the plan.

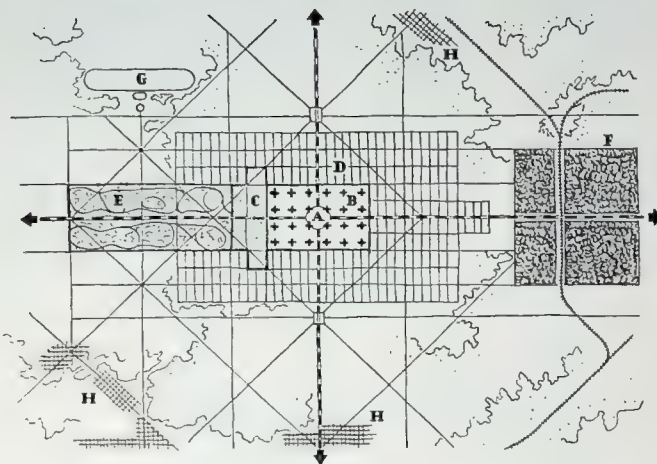
A City for Three Million

Although Garnier thought of his city in terms of possible expansion, he never tackled the problem of the really big city. It was left to a Swiss, Le Corbusier, to do this. He got out an ideal scheme in 1922 for a city of three million inhabitants. His object in doing this, he said, was not to overcome the existing state of things, but, "by constructing a theoretically water-tight formula, to arrive at the fundamental principles of modern town planning." Certainly many of the principles he demonstrated in this and subsequent schemes deserve to be much more widely known than they are, even if we don't agree with all of them.

Le Corbusier designed a compact and highly organised city, with looser and more elastic garden cities around it, separated by a green belt of woods



13

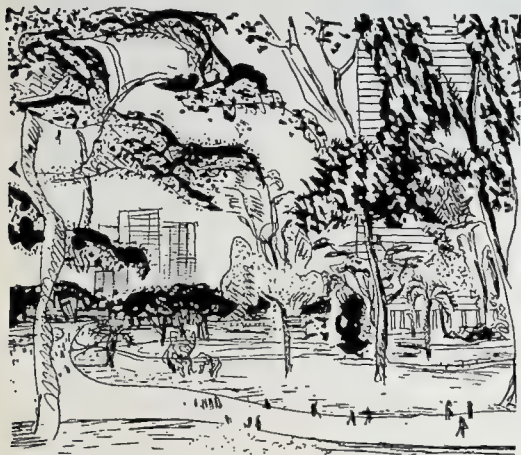


The drawing above shows the crossing of the two main raised arteries in Le Corbusier's ideal scheme of 1922, and the skyscrapers and residential area around it. The diagram on the left shows the plan of the city. A is the central station, B the skyscraper area, C the centre for civic buildings and entertainments, D the residential area, and E the park. Outside the city are the industries F, the sports centre G and the garden cities H.

and fields. The industrial zone was also separate, and was linked to the city by an arterial road, which ran through the middle of the city, straight as an arrow, and shot out into the country at the other end. It was raised above the ground all the way. Crossing the city in the other direction was a similar raised artery. All heavy goods traffic was underground, unloading at basement level, and all trains were underground too. Thus not only could traffic penetrate quickly and without congestion to the middle of the city, but the site itself was kept free of all fast or heavy traffic, and only cars doing door-to-door journeys needed to travel at ground level. Above the intersection of the two raised arterial roads was a landing-ground for air-taxis, and below it the railway station. This

was the heart of the city, and here, in a central park, Le Corbusier put twenty-four great skyscrapers to house all the business and administrative offices. These were placed well apart, and amongst the trees at their feet were the cafés, restaurants, shops, and theatres. The rest of the city around this central part was the residential area, set spaciouly in parkland.

The whole city was, in effect, set in a park, and the proportion of ground actually built on was very low. Le Corbusier's reason for tall buildings was that besides getting the advantages of simple and rapid vertical circulation, you could in this way have a high density of people to the acre, thus cutting down the size of the city, and at the same time getting ample open space, devoted entirely to recreation. But he realised that if the density was increased by piling the city up vertically, excellent transport



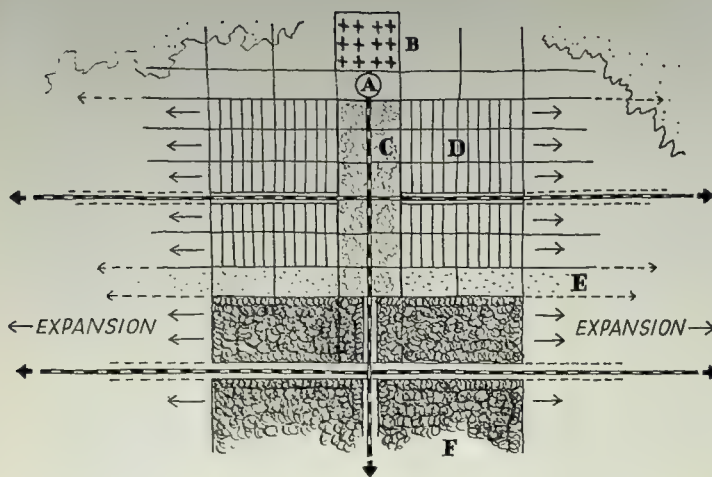
14

Le Corbusier's vision of gleaming glass skyscrapers set in spacious parkland. Contrast this with the cramped confusion of New York.

services were needed to get the people away in the rush hours. This was New York's trouble, he pointed out; the American skyscrapers were built on the old narrow street plan, and not only shut out the air and sun from each other and from the street, but created appalling traffic congestion. The skyscraper, he urged, if properly used, "remains a noble instrument."

The Expanding City

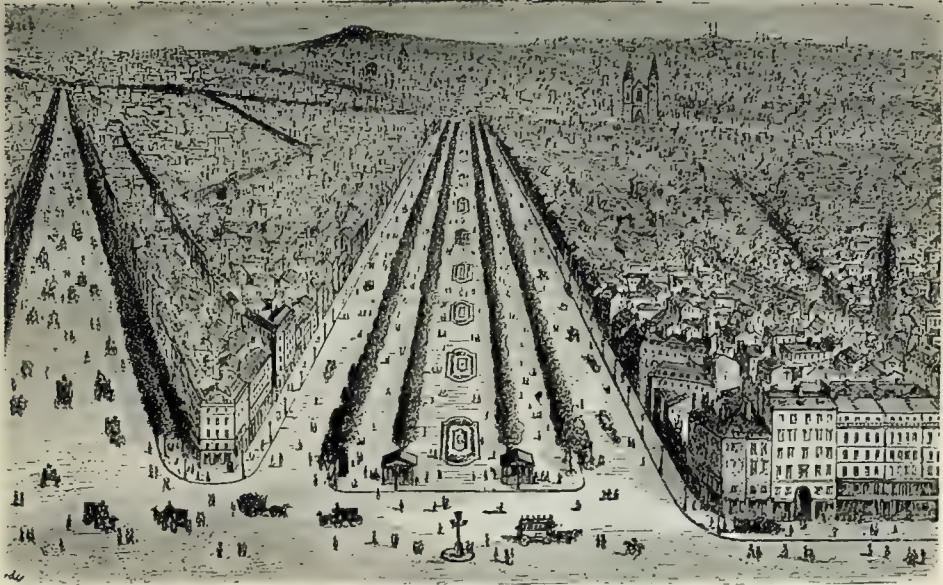
This city of Le Corbusier's, although it developed very clearly a number of important principles, had one failing that he subsequently remedied in his scheme for "La Ville Radieuse" in 1933. This later plan incorporated the principle that the city should be planned in a way that allowed for considerable expansion without spoiling its unity or amenities.



A diagram of Le Corbusier's "Ville Radieuse." The main station is at A, and the skyscrapers at B. Between these and the industrial area F is the central park C containing civic buildings, theatres, etc.; and on both sides of the park are the residential areas D. A green belt E separates this from the industry. Expansion of the city can take place to left and right without increasing the travelling distance between work and housing, or spoiling the amenities of either, and easy access to open country is maintained along the main arterial roads.

Using much the same elements, but omitting the garden cities, this expanding city plan had the business and administrative skyscrapers outside the residential area, at one end of a raised arterial road that ran through a civic park in the middle of the residential area and out to the industrial area at the other end. The other raised roads crossed this at right-angles, and along these the industrial area and the residential area could expand from the centre without increasing the travelling distance between them.

Of course it is fairly simple to design an ideal city on an ideal site, and very much more difficult to deal with existing cities in real life. Still, if we are going to tackle the problem of our cities at all, we must look ahead a long way, and work out for them a skeleton plan to which rebuilding can conform over a long period of years. And this skeleton plan must be bold and imaginative, even at the risk of being called "unpractical" and "visionary," and, yes, even at the risk of being attacked as "un-British." For we can be sure that any plan that does not raise a certain amount of hostility, and disturb a number of sentimentalists, will be recognised as the timid, fiddling thing it is by the future generations who will have to suffer from it. From the town-planning schemes we have just described, many principles and possibilities emerge that are pointers towards the future. They should not be brushed aside as too ambitious, for we have to try and think on this scale. We may not think exactly along these lines, but it is the clarity of their thought and the daring of their surgery that matters.



A contemporary drawing of Boulevard Richard-Lenoir, one of Haussmann's cuts through Paris. The effect is magnificent, but what an appalling muddle remains if you stray from the main street!



A plan of Paris, with the alterations carried out by Haussmann shown in black.

The Example of Paris

Drastic surgery has been given to cities in the past, notably to Paris in the nineteenth century. In a period of fifteen years Haussmann, backed by Napoleon III, drove great new avenues through the old chaotic streets, and made new arterial roads leading out of the city. His work was on a vast scale, and to him Paris owes much of its reputation as a fine city. But his sort of solution, though it shows us that big things can be done, is not what we need to-day; Haussmann made magnificent streets and eased Paris traffic, but behind the architecture of the streets the old unhealthy

muddle remained. We have different needs, and we see greater possibilities. If they do not answer our needs we must forget the Renaissance ways of planning which Haussmann employed, and create new methods for ourselves. And as for appearances, most new things look strange at first, and take some getting used to. But beauty is not the monopoly of the past, and we are capable of making our own without copying.



15

A block of flats at Malmö, Sweden. Although very many families will probably always prefer to live in small houses with gardens, many people would be less prejudiced against flats if they had the chance of living in some like these, with lifts, fine big balconies, and ample open space all round them.

General Principles

Let us, before looking at the city in more detail, sum up some of the general principles that emerge from the projects we have been looking at. Briefly they are these: a clear separation between different parts of the town which have different functions; a clear separation between different kinds of traffic, and unobstructed routes for fast through traffic; safe and pleasant walks for pedestrians; the avoidance of the corridor street which is lined with buildings; easy access to the surrounding country, and a green belt unspoiled by suburban ribbon development; the infiltration, right into the heart of the city, of continuous parks and open spaces; and, where it is appropriate, the use of skyscrapers—providing they are combined with fine open spaces around and between them at their feet.



16

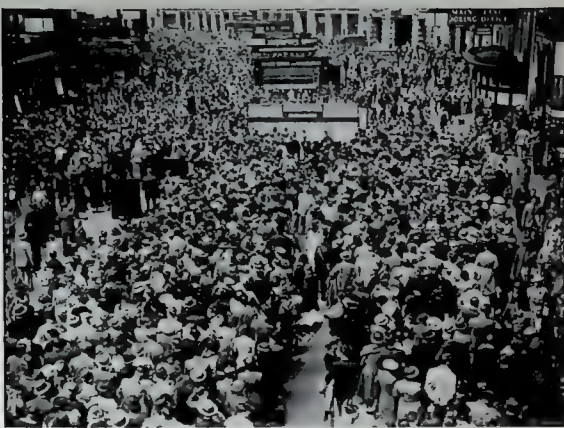
Part of the model of a project for a new town in Berkshire, with terraces of houses, and some blocks of flats on the left. This shows how modern town planners try to get open spaces and trees flowing right through the town, and how they plan the residential buildings clear of the main traffic roads. The photograph below is a good contemporary example of the typically English way of grouping houses round a secluded courtyard.



17



18



19

Planning must deal not only with multitudes of people in public places, but also with the intimate circle of the family at home.

Turning from the outline of the whole city, let us look at it on a smaller scale, from the point of view of the individual person in it. For although town planning is concerned with great numbers of people, and the zones where, in our multitudes, we live and work, and although we must be able to look at our cities and plan them on this large scale, it is no less concerned with small numbers of people, with the individual and his home and social circle, his daily life of work, amusement, and general welfare. It is around these personal needs that the plan of the city must be built up in detail.

A city could provide a full, varied, and coherent social life, and the form that a city takes can in no small measure make or mar the achievement of such a life. Our cities to-day prevent it by their very formlessness. They are so big that man cannot grasp them in his mind; the districts melt into one another in great, shapeless, blurred agglomerations. If he lives on the fringe, perhaps his district will be distinguishable from the rest because it has been recently built, but it is as likely as not that it will have no coherence, no centre, and that it will be empty of atmosphere, a sort of negative dormitory.

A City Structure

Contrast this with a small market town, for instance, which is of a size that can be felt as a social unit, and which has a centre intimately bound up with the lives of its inhabitants. Contrast it even with some few parts of London, like Chelsea, Highgate, or Hampstead, which were once villages,

and which still, to this day, have a faint echo of their former individuality. If our cities are to become good to live in, we must regain in them this social human scale which unplanned development has eaten up in its greedy haste, and one way in which we could do this might be by splitting them up into areas whose size is determined by our everyday needs.

Cities and towns have the advantage over villages or isolated country cottages in being able to share a large variety of communal services. But most of our existing cities do not share these services very well; we tend to get a fashionable part that contains too many good things, and far too few local centres outside it. Starting at the bottom, with a small number of people, let us see how we could build up a healthy and sensible structure of services and amenities in a way that we could apply to even our biggest cities.



20

Contrast the crowded and brutal confusion of Charing Cross Road with the broad and generous atmosphere of the market town of Yarm, in Yorkshire. The market centre is a real part of the people's lives; it has atmosphere and a human scale. Naturally we don't want to *reproduce* Yarm in the middle of our cities, for the problem is quite different, but there is a lesson to be learned from it.



21

29

There are some things that all of us need close to our homes, within very easy walking distance; a few small shops for everyday things, and a café and a pub where we can meet our friends. And if we have babies we need a nursery school and a crèche, where we can leave them to be looked after when we go out—for few of us are likely to have nannies or domestic servants to keep an eye on them. About a thousand people can support a small nursery school, so let us suggest that a thousand people should form the smallest unit of our city, and that this residential unit should, by the way it is laid out, have a pleasant community feeling of its own.

There are other things that we don't need quite so often, and that we would not mind having a bit longer walk to get to. Rather bigger shops, for instance, selling the sort of things we buy weekly and store in our homes. Several of these would make up a sociable little shopping centre, and there we would be glad of a restaurant, bigger than our local café, and capable of giving us proper meals. We would also like places of worship, a lending library, and a club or community building of some sort, where we could hold meetings and dances, play games, and produce our amateur concerts and theatricals. We also need doctors, so why not put them all together and let them share a small, but properly equipped, health and treatment centre? And we need schools, both junior and senior; often nowadays the children have to go quite a long way to their schools, crossing busy and dangerous streets, taking buses and trains. About five thousand people can support a junior and senior school that are educationally about

During the war many new nursery schools have been provided by Local Authorities so that mothers can have their children looked after while they are away doing war work. Let us hope we shall be able to keep these going after the war, and have them conveniently close to where we live, for however strong may be the family ties, mothers want to go out to shop and to enjoy themselves—and so do fathers.



We all need medical care, grown-ups as well as children. Peckham Health Centre was a family club where you could play games, dance, swim, meet your friends, and have regular medical attention to keep you in good health. A part of the lounge is shown on the right.



24



25

A well-designed butcher's shop in Sweden; and below, two gay restaurants, one at the New York World's Fair, and the other among the trees in Regent's Park, London.



6



27



28



29



30

Another picture of the lounge at Peckham Health Centre. "Going to see the doctor" is often mixed up in our minds with something rather unpleasant and painful, because we generally leave it until we have something wrong with us. At Peckham they tried to keep people well instead, and to make medical care a natural part of the social life of the place.

Swimming baths are for fun as well as exercise. This delightful one in Stockholm shows what can be done if baths are carefully planned in good surroundings.

the right size, neither too small nor too big, so let us suggest that five of our residential units should make up a neighbourhood, and share these schools and other amenities, and that this neighbourhood should also be planned in such a way that it has a coherence of its own. Such a neighbourhood would probably need offices too, and perhaps might have some small



31

We still have too many dingy old schools with depressing asphalt playgrounds. No wonder some children don't enjoy lessons. Sunlight, fresh air and bright surroundings can make a lot of difference. The school above is at Zürich.



32

Peter Jones, a big store in Sloane Square. The front is all glass, and it looks very bright and pleasant, and can be kept clean even in the dirty London atmosphere.

local industries, like bakers and cobblers and laundries. It should certainly have a park, and it can readily be imagined that if it was planned with skill it might in itself be almost a park, with the buildings set in it in groups.

But still we have not got all the services we rightly expect from town life; there are theatres and cinemas, a hospital, specialised shops, and stores



33

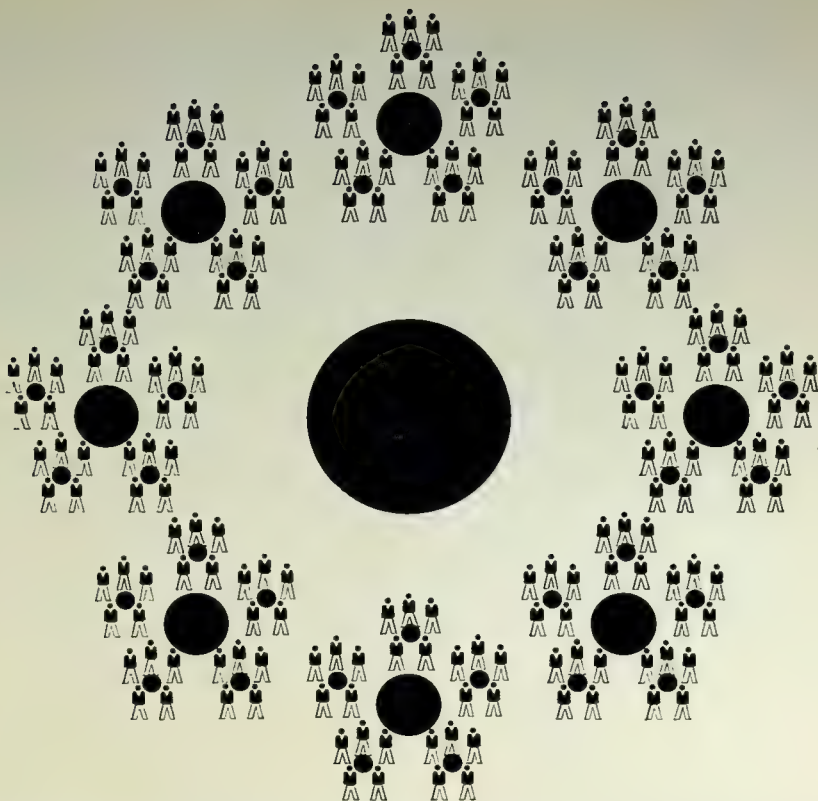
These sheep in Hyde Park are only a stone's throw from Marble Arch. London is better provided with fine parks than most of our cities, but it hasn't got nearly enough. Small recreation grounds aren't in themselves sufficient: we need some places where we can take good walks and get out of sight of the surrounding city.

where we can find almost anything. Supposing then that we make a further centre which has these things, shared by about forty thousand people, and which, with its town hall, constitutes a borough made up of eight neighbourhoods. Here again we would need a park—quite a big one this time—and swimming baths and a railway station.

The next step up might be a whole district, made up of six boroughs, which would, in its turn, have its own centre, with a first-class technical school (the older children don't mind travelling, and can look after themselves), an exhibition hall, and a place for concerts, a bigger shopping centre, a market hall, and a special hospital.

At each step in the building up of this great district, our social needs are organised so that the whole has a coherence based on local centres. It is not suggested what exact form these should take, for there are many possible ways in which it could be done, and solutions would vary according to geographical and other conditions in the locality. All that is suggested is that an underlying system of this sort could give a convenient and satisfying pattern to our cities, and that it is by no means unpractical to think that if such a pattern was taken as a long term policy, both rebuilding and the ordinary day-to-day replacements and additions of buildings could follow it.

Perhaps a district like this is the biggest unit we should allow in our cities. Great cities might be made up of a number of them, separated from



A diagram showing the relationship of the social services of a borough, as outlined in the previous pages. Each little man represents 200 people, and five of these form a residential unit around their immediate services. Five residential units grouped together share larger services and form a neighbourhood, and eight neighbourhoods share still larger services and make up the complete borough.

one another by green belts which lead out into the surrounding countryside. All the districts would share a big entertainment, business, and administrative centre, to which they would be linked by a direct and rapid transport system, and all would be within easy reach of the main industrial zone.

A Governing Plan

However, a pattern of this sort, which is based on our personal needs, and designed for our delight and convenience, is not in itself enough. The whole city must have its governing plan, within which the smaller patterns are details. Only a governing plan can give clarity and direction to the whole. We have seen how Tony Garnier organised the elements of the

city into logical parts, and how Le Corbusier went a step further, planning in a radical way for modern traffic, and recognising that the city pattern should permit expansion. The governing plans for the redevelopment of our existing cities may need to be no less radical in their conception.

Although they may have to be radical, they must certainly not be rigid. Each governing plan should be based on an exhaustive survey of existing conditions in the city, and a forecast of its future economic development, and the housing, industrial, and traffic needs that this development is likely to cause. Hand in hand with this should go research into the needs of the inhabitants. These are the conditions of the problem. They are conditions that time will alter, for however careful the analysis upon which they are based, unpredictable changes will obviously come along later. But they are sufficient for us to be able to predict the main course of development of a city, and to lay down a programme within which this development can take place according to its own laws over a long period of time.

This programme, or governing plan, should be of a general kind, and should provide only the bones of the matter. It should be flexible, so that it can be varied from time to time as new needs arise and local conditions alter. It should be the work of the city planning authority, guided by the national planning authority who should be responsible for providing the wider national skeleton, of which the city is a part, and to which the city must be related.

Within this governing plan, the detailed planning of districts, boroughs and neighbourhoods, could be done locally. Nobody wants all the planning to be done from on top, by great central departments, and the more planning we get from the bottom the better. But general planning from on top is clearly necessary if all the detailed local planning is to add up to a satisfactory city, and all the cities and the spaces between them are to add up to a satisfactory Britain.

The Case of Amsterdam

A governing plan of this sort is in operation in Amsterdam, and has guided the expansion of parts of the city since the beginning of this century. The latest plan for Amsterdam South, which was drawn up in 1934, is based on extremely close research into all the conditions which determine the make-up of a community and the probable future trends of population. The plan provides the backbone of a long-term building programme, laying down the main traffic routes, the various types of building that will



A part of the model of a big new park that was being laid out on a five year plan in the suburbs of Amsterdam before the war. It is about three miles long by one mile wide. The original site was almost devoid of trees, and the full development provides for almost a thousand acres of woodland. The model shows part of the boat-race course at the top, and the yachting lake and main restaurant in the centre.



A drawing of the development plan for the South of Amsterdam. The big park lies in the distance. This plan is a long-term one, and is intended as a governing plan only. Although it is worked out in some detail, it is anticipated that considerable local changes will be made in it from time to time as the work of development proceeds.

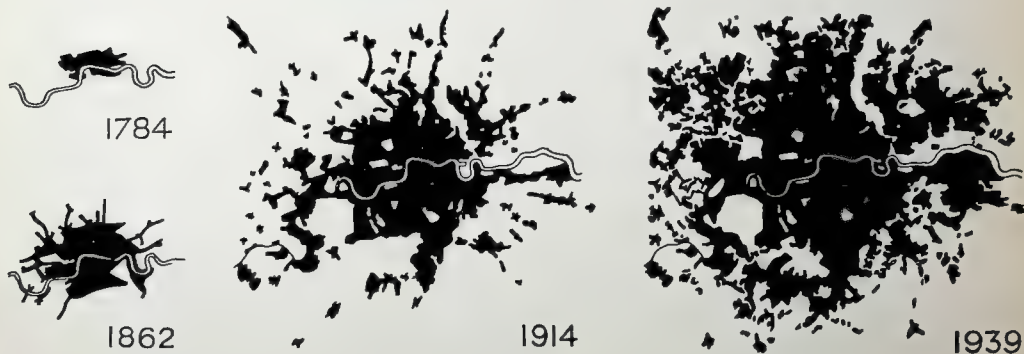
be required in particular areas, and the standard of amenities that must be provided. It maps these out in fair detail, but allows for considerable local changes providing these conform to the general standard, and are properly related to their surroundings. It develops a magnificent park system throughout the city, and in this connection the results of the preliminary research are particularly striking, and will have a profound effect upon the future city pattern. It was found that people make little use of a park that is more than a quarter of a mile from their home, and accordingly no two parks in the plan are more than half a mile apart. Here is a concrete example of the application of the so-called "visionary" standards that Le Corbusier laid down in his ideal plans—the infiltration of open spaces and greenery right to the heart of the city.

The Case of London

Let us take London as an example, and illustrate the form that a governing plan might take if we set about replanning our own cities in this way. No authority has yet collected all the relevant facts upon which the plan should be based, so we can do no more than suggest a rough outline. But perhaps it will show the scale on which such a plan might operate.

The first aspect of the problem of London, as of all our great cities, is to make it work efficiently. London works inefficiently because at no stage in its development has it been planned. It has expanded around

The growth of London: four plans drawn to the same scale. The expansion between 1914 and 1939 is particularly remarkable—and tragic. Are we going to allow it to continue to expand in this unregulated way, or can we find a way of guiding its expansion so that it can become fit to live in? A possible method is shown on page 41.





36

The heart of London. Most of London's historic buildings are at its centre. But walk around the great areas outside this centre, and how much can you say is really worthy of preservation?

its old pattern, and in expanding has extended that pattern. Its pattern is formed by a road system completely unsuited to modern traffic, and the requirements of a city of seven million inhabitants. The result is appalling congestion, and an incalculable waste of time, energy and money. Its underground services, too, have accumulated over a long period of years, and the new services that we may expect to enjoy in the future, such as district heating (which is the piped supply of hot water to a whole district) and the disposal of kitchen waste down special drains instead of through the streets in a dustman's cart, need to be planned together when laying out our new streets.

The second aspect of the problem of London is to make it a city that is good to live and work in. Efficiency is not in itself a solution.

With the exception of certain individual buildings and small areas of historic interest or recognised architectural merit, the central area of London is continually being pulled down and rebuilt. Its suburbs, too, are continually expanding. Its character changes with every generation. Judged by either æsthetic or humane standards, the parts of London genuinely worthy of preservation are relatively very small. Sentimental standards should not, in general, be allowed to stand in the way of changes that are necessary for more cogent reasons.

What is needed for London is a radical governing plan to guide rebuilding and future development on a long term policy. This plan must govern the whole of greater London, and both efficiency and amenity must be its aim: the solution of the traffic problem, or the slum problem, or of

any other one aspect of London's many ills, must not be considered in isolation. An Englishman wrote in 1937: "New York, Rome, Vienna, Berlin and Amsterdam have each a planned future. London can see no further than across Waterloo Bridge." We have to see a lot further than that now, in both space and time.

The Linear Principle

Figure 1, below, illustrates what is called the "linear" principle of planning for an expanding city. There are other methods besides the linear one, but let us take it as an example. Reduced to its most elementary form it consists of a main artery of communication that passes clean through the city, with the residential area along one side of it and the work area along the other side. Linear expansion of work and housing can take place in either direction along the main artery without altering in any essential way the relationship of the two parts, or their access to the main artery or to the surrounding country.

Geographically and economically London is situated on what we might call the London-Liverpool line. This is an axis that runs from the industrial Midlands down to the port of London, and thence out to Europe and the world. Taking this axis as the main artery of communication, let us adopt the linear principle to London, again in elementary diagram form. This is shown in Figure 2. London's work, its cultural centre, its seat of Government, its port, its Western industry and nearly all its historic

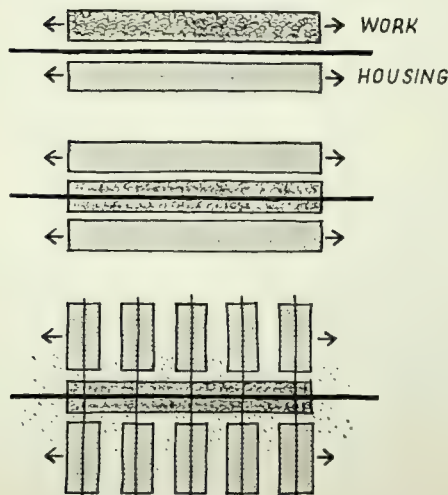


Fig. 1.

The linear principle of expansion. Work and housing are separated, and lie along both sides of the main axis of communication through the city, and can expand in length along this axis. Theoretically, however far they expand, the time taken to travel between them is not increased, and open country is within easy reach of everybody.

Fig. 2.

The linear principle applied to London in the most elementary diagram form. Industry, business, and the historic centre lie along the main axis, which is the London to Liverpool line, and there are two housing areas outside it.

Fig. 3.

The same London diagram modified in order to split up the housing areas into separate districts with green belts between them. They each have direct communication with the work area and the main axis through the whole city.

area, form a spine along the main artery. The big residential areas lie on either side.

Taking a further step, again in diagram form, let us split the residential areas up into districts, with open spaces between them. Figure 3 shows this. The countryside now penetrates to the centre of the city, and every part of the city has access to it.

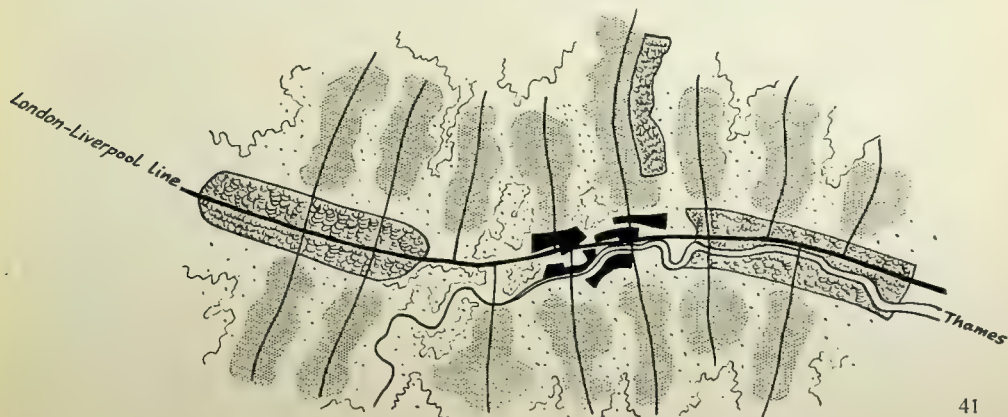
Finally, let us modify this skeleton to the more detailed geographical, historic, and local characteristics of London. Figure 4 shows in outline the governing plan we have arrived at. No further expansion to North or South is allowed, and the open spaces between the districts are preserved from development.

This London would work. It would be easy to travel about in: it would be easy to get away from: it could be delightful to live in. And what, in terms of bricks and mortar, should we have to sacrifice to achieve it? Very little that anyone really cares about, and little that would not in any case be replaced by more up-to-date buildings before the century is out. Physically it is perfectly possible; it is estimated that the London building industry, at its pre-war level of size and efficiency, and with pre-war building methods, could complete the whole task of demolition and rebuilding in twenty years. With more rational building methods the job could be done more easily.

Of course, this is not illustrated as the only solution to London. It is here to indicate a way of approaching the problem, and to show the idea

Fig. 4.

A governing plan for London, based on the linear principle. The existing historic areas at the centre are shown in black; the industrial areas run along the London-Liverpool axis in the East and the West, and there is also a further industrial area out to the North-east. Between the housing areas the country filters in right to the heart of the city. All expansion would take place to East and West, and the housing areas would not be allowed to straggle out further to the North or South.



of a long-term governing plan applied to a city that most of us know. A plan of this breadth would imply great legislative and financial measures, but so must any town planning that is worth doing. In the past our reluctance to control the profitable uses to which land can be manipulated has made any really positive town planning almost impossible, and has put blinkers on our vision. If we are going to exercise control, let it be thorough and let us think ahead boldly and imaginatively. We can be sure that future generations will give us nothing but thanks.

Rural Planning

In the past town and country planning has tended to be merely negative, and has too often been concerned with mitigating the evils of what was fundamentally a bad job instead of with laying the foundations of a good one. Particularly in the country has this been the case. The preservation of the countryside as a thing of beauty has occupied attention to the exclusion of other considerations, and although this preservation is of great importance—and it hasn't been taken seriously enough—our rural areas are not just exhibits for the delight of townspeople in search of rest and recreation, but are in themselves an industry. In fact, agriculture is the dominant industry of eight-ninths of our country's area, and the delightful picture it presents is not a natural one, though we all call it "natural scenery," but is a pattern that man has made in working this industry.

So in thinking about planning and rebuilding in rural areas, we need to have in mind the two functions of the countryside. Firstly, it has to provide food and other natural products. Secondly, it must provide space for recreation, particularly for those of us who live in cities, though perhaps if our cities were better planned we should not feel the need to escape as desperately as we do now.

In the years before the war, the spread of building in rural areas was not only, in many cases unnecessarily, spoiling the appearance of the country, but was eating up land of good farming value. Britain is not so big that we can afford to allow this to happen again; we have good soils for a wide variety of farming, but they need to be jealously safeguarded. Clearly our skeleton national plan, if it is to provide for a flourishing agriculture, must see to it that, as far as possible, our good soils and woodlands are preserved, and that on poor land, perhaps, there is an extension of afforestation. Perhaps, too, it will be able to go further than this, and lay down positive lines along which agriculture should develop in various areas, for some soils and climatic conditions are more suited to particular forms of farming than others, and a sound national policy would direct their proper use.



37



38



39

Whatever our general agricultural policy may be in the future (and it is an integral part of our national industrial policy, and of our position in world trade), we can be sure that it will have to produce fresh foods—vegetables, fruit, milk, and eggs—if we are to be kept healthy, and if a real attempt is to be made to prevent the diseases due to malnutrition which were prevalent before the war. In this respect the countryside is an obvious partner to our towns and cities, and the green belts round our urban areas could in many cases be given up largely to this type of food production.

Social Life

In the rural areas that are within easy reach of urban centres, the people who live in them have the opportunity of enjoying the advantages of entertainment, shopping, education, and health services that the towns provide. But most countrymen are not so fortunate, and in the past their

lack of good amenities, and of any chance of a social life close to their homes, and the inadequacy of rural transport services, has probably been largely responsible for the drift of the population away from the land. And on top of this, compared with the town-dweller, the countryman often lives in conditions which are primitive in the extreme. However picturesque they may look from outside, rural slums exist. There is plenty of rebuilding that ought to be done, and that will have to be done if agriculture is to flourish.

But good amenities for the countryman can't be put alongside every cottage. The benefits that are within reach when men live together in communities are more difficult to provide when the population is scattered. Good transport services help, of course, but it seems unlikely that they in themselves can provide a solution. For instance, long journeys to school are not really satisfactory for the children, however pleasant the bus and however efficient the school. These and other considerations, not least of them the trend towards more productive methods of mechanised farming, which many people regard as inevitable, point to larger farming units than we have had in the past, and consequently towards the possibility of grouping farms, homes, and amenities into sociable village communities to a much greater extent than we are able to now. If this is to be the way that our up-to-date agricultural methods will take us, rural life will have the opportunity of catching up with the towns in civilised comforts and conveniences. In parts of the country there will still have to be lonely shepherds, but this is not the general condition.





Impington Village College, Cambridgeshire, showing the main hall, which has a stage and cinema, and the workshops and classrooms in the background. The picture opposite is of another Cambridgeshire Village College, at Linton.

Here, then, is the basis of a rural structure something like the one we outlined for our cities, beginning at the village grouped round its social services; then the market town, perhaps, which is the focus of several villages, and which provides more complicated services, and so on, up through various stages. Much of this structure is actually in being already, just as it is to some extent in the city, but it needs new sorts of buildings and conscious guidance within national, regional, and local plans if it is to yield the maximum benefits all round. With it should come the chance of electricity, piped water, and drainage for a very much greater number of country dwellings than have these services to-day, and an overhaul of the rural slum, by reconditioning where it is appropriate, or by building new dwellings.

Village Colleges

In Cambridgeshire we already have the tentative model of one of the parts of a future rural structure. There we have "village colleges," which serve a group of adjoining villages, and combine in one building the social, educational, and administrative activities of the neighbourhood. They call them village colleges, but they are not at all institutional or formal in atmosphere; they are community centres, where children and adults can go for recreation of all sorts—cinema, theatre, gymnastics, meetings, games—or, if they like, to learn something—carpentry, languages,

or what they wish. They are like the village institute, but modern, well-equipped, gay, and generous. It is not difficult to imagine the difference that similar community buildings would make to rural life if we had them all over the country, combined with health services, perhaps, on the Peckham model.

Leisure

So much, and it is little enough, for the countryside as an industry, and the housing and welfare of the people who work in it. How about its second function, that of giving fun (and a change of air and a broadening of vision) mostly to those people who don't work in it? The English are notable for believing that a holiday is hardly a holiday at all unless it is by the sea. Perhaps that is because the sea is within fairly easy reach wherever we live, and also because, apart from Youth Hostels and certain mountainous and moorland districts, we are so poorly provided with holiday facilities inland. But even if it is because we are a seafaring nation and have the sea deep in our blood, we have a limited coastline, and if holidays with pay become the rule rather than the exception, it is not big enough to take

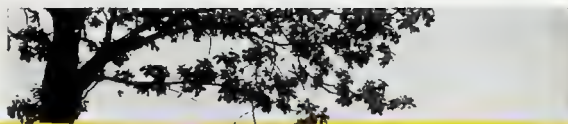
42



A summer holiday at Blackpool. This may not be everybody's idea of a holiday, but lots of people love it, and we must provide for the entertainment of great crowds at the seaside as well as preserving other parts of our coast for quieter and more secluded holidays.



50



of this type might be built. The community country holiday, if it appeals to the English, may give rise to new types of buildings and amenities which we cannot, at the moment, predict. But a far-sighted planning policy must provide for it.

Before the war a number of school camps were built in the country, partly in anticipation of evacuation, but also to meet the urgent needs of children in urban areas for a change of air and a spell in pleasanter surroundings. That need will continue after the war, for even taking the most optimistic view of city replanning and social welfare, nothing is going to happen overnight. Add to these, hospitals and sanatoria, many of which would be far better right out of our towns, and without enumerating them any further, it will be seen that the purely recreational aspects of the countryside are likely to be extremely widely developed. These new leisure centres will not only need careful planning from the point of view of the preservation of the beauties of the countryside, but may in themselves profoundly affect rural life, and will have to be balanced with the centres

Below, another community centre in an English war-time hostel, set in delightful rural surroundings. The theatre is on the left, and the long, low building stretching towards the right contains the lounges and games rooms.

Right, a Trades Union summer camp in America, showing the terraces that open off the dining-hall.

of agricultural population. Perhaps they will play an important part in the social life of the countryman, and even in his workaday life, too; harvesting holidays may become more than a war-time gesture. Clearly the case for national forethought and direction is as abundant in this complicated rural pattern as it is in the more closely knit pattern of our towns and cities.

Transport

Linking town and country is transport, by rail, road, water, and air, and perhaps, in the future, by continuous belt or pipe for certain types of freight. Here, too, national direction is essential, based on research into what must often be the conflicting interests of agriculture, recreation, and efficient communications. The planned location of industry, and advances in other forms of transport, may well bring about profound changes in our railway network, and certainly our existing road pattern will, in many places, prove inadequate, however much we widen our old roads. A bold policy will be needed for the planning and construction of new trunk

53





54

Two roads. There is not much likelihood of the Cornish one above being widened and ruined, because it leads to nowhere important. But when roads like this do become unserviceable for modern traffic they might well be preserved as footpaths. New trunk roads can be magnificent if they are well laid out, and are kept as roads pure and simple, and not used as strings on which to thread buildings. Witness Merritt Parkway in America, below.

55



54



56

Laughing Water, at Cobham; an example of what our roadhouses and roadside cafés could be like if we took more trouble over them.

roads suitable for really rapid traffic. That such roads can in themselves be beautiful things as well as efficient, and that they need in no way ruin our countryside, we have proof in some of the American "parkways." But they must be roads pure and simple, not corridor streets. In this country we have spoiled the ship for a ha'porth of tar; we have built by-passes and arterials, and then fouled them with strings of buildings that destroy their beauty and their efficiency.

It is no longer visionary to predict that the possibilities of air communication, passenger and freight, for both long and short distances, will be enormously increased. There are indications, too, that the small, cheap, private 'plane, an Austin-seven of the air, may be within the reach of many families. In the past, landing-grounds have been few and far between, now they are many and large. Before the wartime ones are ploughed up again foresight must be exercised, and before new ones are built, if they are needed nearer certain urban centres, the claims of agriculture must be carefully weighed. We must look ahead a long way, and provide a skeleton plan for both town and country which, while flexible enough to be adapted to unforeseen changes, both in the nature and the speed of technical developments, is rigid enough to provide a coherent, workable, and pleasant pattern. Only in this way can the physical planning of Britain proceed in a logical manner, and the accumulative chaos of the past be remedied, and a new chaos be avoided in the future.

Plan Now

The anarchy in our present surroundings is not due to an inability to conceive something better, but is the natural result of a deeper anarchy which frustrates the achievement of a good life for us all. Physical planning depends first of all, and in a big degree, upon social planning. But given this as a foundation, the task of replanning and rebuilding cannot be properly accomplished unless we apply to it all our resources in a scientific and imaginative manner. Some of the technical, administrative and financial questions that will have to be decided are discussed in the section that follows, and we have already outlined the scope that planning should take and indicated some of the factors upon which it should be based. But the immediate need is for a national skeleton plan here and now, so that by the end of the war the main lines of planning policy will have been sketched in. Only if this is done can the turnover from war-time industry be regulated, and the urgent requirements of post-war housing and services be satisfied in a controlled way. If this is not done, we shall be laying up more trouble ahead.

It is unlikely that detailed plans can be ready in time or that all the information upon which they should be grounded can be available before the end of the war. If this proves to be the case, accommodation which is vitally necessary could be of a frankly temporary kind, and could be pulled down later to give place to development that satisfies a higher standard of convenience and amenity than would be possible in the immediate post-war years. War-time hostels, with alterations to make them suitable for family life, might in many cases be used during this period: others might be built with an eye to their subsequent turnover to permanent recreational purposes; and good portable housing of many types is well within the resources of the building industry if it is properly organised to supply it.

How shall we build?

But what sort of buildings can we expect in the future, particularly when we are once again able to give to their design the care, imagination, and understanding of human needs that good architecture demands? Most of the illustrated section of this book has been devoted to showing that individual buildings are not in themselves enough, and that their relationship to one another and to the spaces in between them—which means town planning—is of paramount importance. And we have indicated something of the transformation that modern town planning could



This Gloucestershire village was built in the old traditional ways with the traditional materials of the locality. It is as hand-made as the products of the fifteenth century carpenter on the left. Sometimes we can still build in this way nowadays, but not always. New methods of building offer us new opportunities, and there are many modern building problems that we could not possibly solve with the old methods.

bring about. Nevertheless, however vital may be their setting, it is the buildings themselves that will make or mar the final result.

We cannot predict precisely what sort of buildings we shall have, of course, nor exactly what they will look like. But we can see, already, what things are likely to change our ways of building, and what effect this change may have on our ideas of what is beautiful architecture.

In the past man has built with a fairly small range of materials. Most of them have been natural ones, and of these some have been the materials that he has found in his own locality. He has not often transported materials very far, except for some of his more important and expensive buildings. He has fashioned his materials into shape by hand, with simple



58

New methods of building.—
Raising one of the wooden
arches of the Crystal Palace.—
This great exhibition building,
constructed almost entirely of
a frame of standardised cast-
iron sections, and clothed with
glass, was one of the most signi-
ficant architectural achieve-
ments of the nineteenth
century. It exemplified the
birth of the machine-made
building, and was very lovely
into the bargain.

tools, and has put them together slowly by hand, brick by brick and stone by stone. The materials he has used have imposed great limitations on the sort of structures he has been able to invent, but he has produced very beautiful buildings according to these limitations—buildings as beautiful in their own way as anything we are ever likely to see.

Machine Made

The machine is only another sort of tool, and it, too, can fashion beautiful things. It can fashion them quickly, and in great quantities, but it makes a better job of simple shapes than of the very complicated ones with which, for instance, a mediæval mason used to embellish his stonework. With

scientific knowledge behind it, the machine can produce an immensely wide variety of materials for building. These materials, unlike stone and timber, which have proved their value for certain building purposes, can be specially invented to do particular jobs—and, if necessary, to do them for only a certain length of time. Using modern transport they can also be made easily available in any part of the country, or of the world for that matter.

Some materials have structural possibilities undreamed of in the past, and enable man to exploit these possibilities easily and economically. Once man has got over the first feeling of strangeness that he generally feels when faced with a new thing, he may see a new sort of beauty that hadn't occurred to him before. Such a beauty some people recognised in Paxton's daring and luminous Crystal Palace, or, later, in Maillart's lithe and incredibly thin concrete bridges that leaped across Switzerland.



59

New methods of building.—The old solid wall construction, pierced at intervals with small windows, produced one sort of appearance. Reinforced concrete gives rise to something quite different. This block of flats at Zürich is carried on a few slim posts, from which the floor slabs are cantilevered out. The walls support nothing; they have become light screens against the weather. There is no heavy effect of mass and weight; the impression is one of balance and lightness. Similarly with the reinforced concrete bridge by Maillart on the right.



60

59



61

A prefabricated timber house being put together in Sweden.

Not only does the machine produce new materials, new structures, and changing appearances: it also gives rise to new ways of assembling materials. In the past most of the fashioning and fitting together of building materials was done on the site. The site is still the workshop in most cases, though not to such an extent as it used to be, for to-day all sorts of things come ready-made, like windows and doors, fireplaces and kitchen cupboards, and in some countries even bigger things than these have come ready-made from the factory, have been conveyed to the site, and then fixed together in only a few hours. Even such jobs as must be done on the site, such as trench digging, can be done very rapidly nowadays by machine.

These mechanised methods of building have not yet been introduced much in Britain. Sweden and America have done far more in this way than we have. But it is highly probable that they will develop here, and if we are to tackle rebuilding on a big scale it would be folly to ignore them.

The presumption that they will necessarily result not only in buildings that are all hideous, but in buildings that are all precisely the same is

60

Royal Crescent at Bath.
Compare the regular
rhythm of the columns
in this Georgian example
with the rhythm of the
standard metal windows
in the Gliding Club at
Dunstable below.

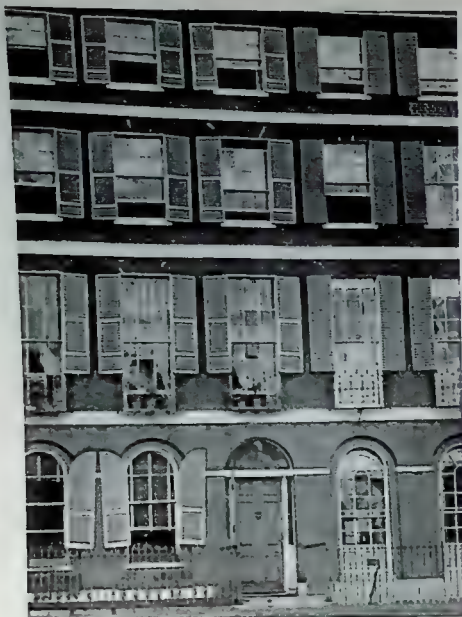


62



63

61



Eighteenth century: Barnfield Crescent, Exeter. Twentieth century: Peter Jones, London. The repetition of a unit of design is nothing new, but different ages use different materials.

entirely unfounded. In no way must what is called prefabrication be allowed to limit the freedom or skill of the designer. (Though it is worth noticing here that sameness is not in itself either a sin or a virtue: the sameness of our eighteenth-century squares and terraces is lovely, but the sameness of our twentieth-century speculative suburbs is abhorrent.)

The essential thing about these mechanised methods of building is that they make possible a larger unit of design. An excellent unit of construction and design was, and still is, the brick, or stone of convenient size. Although not susceptible to such infinite variation, a larger unit, if it is the right size, could provide all the variation that is necessary for accurate and convenient planning and sensitive modulation of mass and surface. The appearance of a fairly large standard unit in design is nothing new: compare the Georgian and contemporary façades in the photograph above.

But no system of design is foolproof, whether it be for buildings or town plans. Beauty and amenity do not occur automatically: they are human expressions. And it takes imagination and skill to produce them. Plenty of both those qualities exist in Britain. It is in no small measure

up to you to see that they are used in your service. Don't think that the limit of rebuilding is efficiency and tidiness, for the possibilities are much greater, and touch our lives far more deeply than these physical comforts can ever do. Nor is magnificence everything. Rebuilding is concerned with the whole framework in which we spend our lives, whether we are rich or poor, young or old, and whether we work in the fields or in an office. We have the means at our disposal to make this framework gay and lovely, to make of it something in which human beings can expand and enjoy themselves, and in which the human spirit can flower as never before. We need this framework desperately badly, both in our public, sociable lives among our fellow beings, and in our private, contemplative lives when we are alone in our homes. Our great unlovely cities do not provide it; they thwart the life of the spirit as brutally as they thwart efficiency. Our countryside will soon provide it no longer if we continue to let things slide. Here and there in Britain we have worthy legacies from the past, spaces that man has purposely designed and built for a good life. We can do it better than ever it has been done before if we really care enough about it, and we can do it more widely, so that we can all enjoy the benefits. But we must all care about it, and all do what we can to make it come true. If we do not care about it, we don't deserve it, and sure enough we shall not get it.



What can You do?

How can you, the private citizen, help and make your own personal influence felt in the task of rebuilding Britain? It is no good "passing the buck" and leaving it all to the "experts" and the "authorities": for the latter often cancel out the former, unless you, the private citizen, see to it that the right experts get the right opportunities. That is well within your powers.

Firstly, you can inform yourself about your powers. That is possible for everybody. This book is an introduction to the job of informing yourself. Secondly, you can act *positively* in relation to Government Authorities and Housing and Planning Authorities. You have rights as a British subject; and you can exercise them.

The central Government defines a policy; the local authorities prescribed by the Government should put it into operation. The Government is the servant of the people; and, broadly speaking, it reflects the wishes of the people. So your first duty obviously is to educate yourself about housing and planning, so that you know specifically what you want, instead of just having a vague idea that you like or dislike something. Now about Government policy: you must know that in reconstruction it is concerned with:

1. The right use of the land, including the location of industry, which is important in our densely populated country.
2. Transport for people and for goods.
3. The provision and disposition of public services such as drainage, water supply, and so forth.
4. The provision and disposition of public buildings and open spaces, including National Parks.
5. The provision and disposition of ordinary houses.

You can influence Government policy and, to assist you in doing so, you can get facts about it from Government publications (including the Official Report of the House of Commons), from your own Member of Parliament, and through the Press. This information is always available, and you can't influence Government policy, or the way your local authority is putting that policy into operation, unless you have got all the facts. *But*—it's up to you to get them. You can see most official publications

at reference libraries. Don't hesitate to worry your local M.P. for facts: you have sent him to Parliament to watch your interests. Do you appreciate the importance of the local authority? Your Rural Council, Borough Council, or Urban District Council has got considerable power which it exercises with a wide discretion. The way that power is used can be influenced by the pressure exercised by active individuals.

The elaboration of a major national policy is a technical matter which must be worked out in detail by the right experts; but the local application of it needs intimate local knowledge, and there the *active, well-informed interest of the private citizen is invaluable*, for without it a district may be ruined by bad development. A single house badly planned affects the occupier; its ugly external appearance disturbs a few neighbours; badly grouped houses may affect many by wrecking a landscape. So inefficient planning of public buildings and public services adversely affects the daily life of the whole community.

Local councillors are elected to serve the collective needs of the community; their technical advisers are your servants. You are really responsible for seeing that the best advisers are appointed, and that the programme they are asked to fulfil does in fact provide for local needs. They are spending your money—they can make or mar the surroundings of your home, and make or mar that home. What are your local authorities doing at this moment about a scheme for your district? Are they doing anything? If so, what? It's up to you to find out, and if nothing is happening, to take steps to make something happen—the right thing. Unless you make it *your* business, it may be neglected; it may be muddled; and it is no good saying afterwards, when a mistake has been committed to bricks and mortar and concrete, a mistake that may last three-quarters of a century, it is no use saying: "*They've* made a mess of it!" *You* allowed them to: you are also responsible.

Probably the best way of getting in touch and keeping in touch with your local authority is through such organisations as rotary clubs, women's institutes, trade unions. An effective way has been through a "Community Council" or a "Council of Social Service," in which all voluntary interests are represented. These bodies have often started social services, afterwards taken over by the public authority, and they collaborate with the ordinary work of the authority.

You must know *what are the actual activities of your local government*. You can demand that they are made public. All town-planning schemes are available for public inspection; but they should all be displayed in prominent and accessible positions. All new public enterprises should

be illustrated and explained before their final form is settled in Council. You should demand that annual accounts of expenditure are published in the Press, in a form easily understood by ordinary people.

Here are some facts about the powers and functions of Local Authorities, including County Councils:—

Land. They have powers to form themselves into regional planning groups. They have power to prepare a town-planning scheme restricting the uses to which buildings may be put. They have power to acquire and to administer land for almost any desirable public use.

Transport. They have powers to operate services. They are obliged to maintain existing roads, and have powers to make new ones, except trunk roads, which are nationally controlled.

Services. Local authorities provide drainage services and maintain them when they exist; in many cases they operate gas, electric, and water supplies. They are obliged to provide educational and medical services, and have powers to expand these. They maintain hospitals, libraries, and welfare clinics, and provide free milk for children.

Public Buildings. They have powers to erect and to maintain almost any kind of building: town halls, assembly halls, public baths, schools, dock and port buildings, public utility buildings, and so on.

Housing. They are obliged to undertake slum clearance and to rehouse people living in congested conditions. They have power to undertake the largest housing schemes. They are obliged to make by-laws and to lay down and maintain certain standards of construction. They also have power to control the outside appearance of buildings and the zoning and density of private buildings.

All these powers can be subjected to your scrutiny and influence. No sensible local authority will resent or obstruct either; and if a local authority isn't sensible, you can change it—if you and others take the trouble to vote.

It's up to You 



Some Account of the work of the Reconstruction Committee of the Royal Institute of British Architects

Planning and Amenities

GOOD building is a national asset and a social service. It implies good standards of accommodation, good construction and good design; but good building in itself is not enough: it must be preceded by good planning. The word planning is often misunderstood, sometimes deliberately. Some people regard it as the negation of the individualism which has for generations distinguished our country, and, in the field of building, has disfigured so much of it; and others read into that word a plea for an inflexible standardisation of life, and the imposition of an unexciting mediocrity. Planning that ignores national characteristics won't work. To disregard the British love of personal liberty in making a national plan, would be as stupid as ignoring the presence of a turbulent river if you were building a city on its banks. Any plan to be acceptable, and therefore workable, made by men and women of our country for their fellow-countrymen must be based on a profound observance of the needs of the British people in their life and work, their health and recreation. It should not inflict institutional ideas, but should provide the maximum opportunity for personal liberty and individual expression within an ordered framework. Planning is only taking thought for tomorrow in an orderly way and on a large scale. It embraces all questions concerning the right use of the land, including preservation of the countryside and agricultural land, and the prohibition of selfish, individual opportunism at the expense of the community. It does not mean merely the choosing of sites for buildings and roads and services.

What are the Needs?

Preliminary organisation is needed before a plan can be made. Research must be done, public opinion canvassed, public needs and aspirations ascertained, and appropriate machinery set up, using what is good in existing machinery. Legislation must be overhauled, methods of finance scrutinised, and the resources of the building industry in all its branches used to the

best advantage. The planning has to be both long-term and short-term; for the post-war problem of rebuilding Britain is two-fold. We have to reconstruct so that we improve, not merely replace; and in this work we incidentally create immediate employment. Methods have to be devised for dealing with both aspects of the problem, and that is a task for Government.

No democratic government can act unless public opinion is behind it; and public opinion is really the sum total of the opinions of people. Those opinions are related to personal needs.

What do most people want? First of all security, to be sure of a job. If it can be work they like, with reasonable prospects and good pay, so much the better, but they must have work in the right place. Then they want a place to live in, with pleasant surroundings, not too far from work and plenty of room for sport and recreation in their spare time, and a reasonable chance for their children to enjoy life. They must have ample food of the right kind and an opportunity of seeing something both of town and country without too much straphanging or the discomforts of long daily travel. In short, people want: occupation; habitation; recreation and education for body and mind, together, of course, with proper nourishment and transportation.

The needs of the Community at large are the same as those of the individual, but they call for planning. The Government is pledged to the principle of National Planning and to the adoption of "a positive policy for such matters as Industry, Housing, Agriculture and Transport."

What are the Plans?

Actually there has been Town Planning of a sort, ever since human communities began. The Acropolis at Athens with its temples and public buildings—the Roman settlements, such as Chester or York—the new towns of the Middle Ages such as Winchester, built by Edward I—or the early Georgian squares of the West End of London—or the squares and crescents of Bath and Brighton—all were architecturally planned.

There have been so-called Town Planning Acts in this country since 1909, and the latest Act is the Town and Country Planning Act of 1932, under which it is possible for the Local Authorities to plan both town and country. Urban and Rural Councils have done something. Sometimes their best; sometimes not; but too often the Statutory plans have in practice been merely restrictive and not constructive in character. It is easier to say "Thou shalt not" than to say "Thou shalt," particularly if there is no skilled guidance at hand to put forward constructive ideas.

When public opinion is strongly expressed, legislation attempts to follow. A case in point is the Restriction of Ribbon Development Act 1935—a misleading title. This Act was drawn up from the road point of view to secure the control and setting back of buildings to the satisfaction of the highway authority, but it does not stop ribbon development.

Then too the Trunk Roads Act of 1936 specified a number of important roads which were to be taken over and maintained by the Government as national roads. Both these Acts, although good in themselves up to a point, tended to cut across Statutory planning schemes under the Town and Country Planning Act, so that in many parts of the country we find two and sometimes three different authorities all having a say as to what should be done in a particular case. *Government and Local authorities must speak with one voice.* There is general agreement, in theory, that there must be a National Planning Authority with power to decide questions of national policy in such matters as industry, housing, agriculture and transport. A national plan which will be really constructive in character and not merely restrictive is therefore essential. This is a matter for which the central Government must accept responsibility, not merely local authorities, or even groups of authorities.

There must be power and driving force behind the plan, and that can come only from the collective strength of public opinion, formed by people who have taken the trouble to study the problem of rebuilding Britain.

The Scope of Planning

Certain matters must be considered nationally, others regionally and some locally, but the main lines must be laid down by the State on behalf of the whole community.

The key-note of good planning is to secure that all land is put to the use for which it is most suitable. There should be the fullest possible use of all existing and potential resources. Britain is rich in mineral wealth of all kinds and still has endless possibilities. We must take stock carefully and then see what needs doing.

Many rural districts are still without water supply or electric light and power and all that this means.

Our railways, though excellent, are nearly a century old and were all built by private enterprise in competition with one another. Here a general overhaul in the public interest could stimulate progress and secure economies. There are far too many stations and miles of redundant lines which could be scrapped, while a new link here and there and the extension of electrification would greatly improve the general service.

In nearly all our large towns there are long stretches of railway embankments and viaducts which have proved vulnerable in war time, and have in the past caused much ill-planned and unsatisfactory development. Why not sink all such lines underground for five or even ten miles from the centre and thus leave the ground clear for a real town plan? The railways must be among the first things to be replanned. With few exceptions our railway stations are badly designed and inconvenient. Such public buildings need, not only the engineer, but the architect, working in close collaboration.

The improvement and development of transport, industry and agriculture are essential parts of a national plan.

The Scale of Towns

Here important questions of principle arise. Are we to allow our towns to keep on growing as they have done during the last century or are we going to adopt what is known as *Decentralisation*? Just before the War, the Barlow Commission—the Royal Commission on the Distribution of the Industrial Population—unanimously recommended that, wherever possible, industries should be moved out of large cities, either into new towns or into some of the smaller centres. How far can this principle of decentralisation be adopted as a national policy, without injuring agriculture or destroying rural amenities? It is a thorny problem, but it is almost certain that some measure of decentralisation will be adopted as part of the future national policy. But there is a definite limit to such possibilities, and the main problem will still be in the progressive improvement of our existing towns, and to ensure an orderly planned organic growth to mature urbanity—if growth at all is deemed desirable. This will be helped tremendously, if it is found practicable to remove some at least of the industries to healthier and more convenient neighbourhoods.

Social Standards and Building

One of our main objects must be the improvement of living conditions and the provision of better surroundings for everyone, whether in town

or country. *The family is still the unit which must be considered as the basis for all social standards, and there is no reason why slums or overcrowded conditions should not everywhere be removed.*

A well-known authority has recently suggested that in every town, there is at least twenty per cent. which should be cleared away, another thirty per cent. which should be definitely improved, with possibly forty per cent. passable, and perhaps, in fortunate cases ten per cent. good. A city is something of which its citizens should be proud, and it is a disaster that actually less than ten per cent. of all new buildings erected between the two wars have been put up without any real architectural advice. What this uninstigated activity has already done for Britain is indeed a main cause of the demand for a new and better procedure. It is now accepted that,

both in the interests of the owner and the public, for every building, no-matter what its size or purpose, there should be a suitable architect.

The constructive work of preparing a national plan is a matter not for one profession only, but for many. The town-planner, the architect, the engineer, the surveyor, and experts in all forms of public services, must collaborate to produce the best results. The preservation of the countryside, coastal resorts and National Parks must all be considered. Then, too, there must be regional development authorities with similarly constituted teams of experts to work out the regional plans adapted to the special needs of their area, but fitting in the framework of the national plan.

Lastly, there will be the local plans in which the Local Authorities everywhere will be able to take their part in rebuilding Britain.

Legislation—Present and Future

HOW far is existing Legislation on Building and Planning adequate to deal with Post-war Reconstruction? An exhaustive analysis of such Legislation has been made, and it has disclosed a confused mass of miscellaneous acts which treat with different aspects of what is essentially a single activity, and which frequently overlap each other. These Regulations are drawn up and administered by Parliament, County Councils, District Councils, Supply Companies, and so forth. They vary from one District to another with inadequate reason. *It is often necessary to approach three or four authorities, in order to erect the simplest type of building.* Under these circumstances, building and incidental costs are frequently unnecessarily increased. Revision of out-of-date Regulations is complicated and difficult.

Three New Codes

A drastic simplification of legislation and procedure is essential if post-war building is to be on a scale adequate to meet the needs and wishes of the community. All existing building legislation should be annulled and replaced by three codes, which should cover the whole field, and from which there should be no exemptions.

These codes should be:—

1. *A Code of Living*, dealing with planning for human needs. It would set out the ends at which planning should aim.

2. *A Code of Building*, dealing with structural standards and technical methods.

3. *A Financial Code*, dealing with the financial provisions necessary for giving effect to the Code of Living and the Code of Building.

These three codes would be related to each other by a system of cross reference, of which an example will be given later.

1. *The Code of Living*. This code would for the most part be advisory rather than mandatory in character. It may be divided broadly into two main sections:—*Amenity Standards* (advisory); and *Health and Safety Provisions* (mandatory).

Amenity Standards. The scope of this section begins inside the home with standards of convenience for the housewife, and space and comfort for the family. It then covers town, district or village, providing among other things for:—

- (i) Acreage of green space in proportion to ground built over.
- (ii) Allocation of churches, theatres, cinemas, shops, public houses, per 1000 of the population.
- (iii) Distance from schools, shops and places of work.
- (iv) Desirable frequency of transport and availability of utilities such as water, light, heat and drainage.
- (v) Provision of health services.

These should all be stated as far as possible on a quantitative basis, and statistics of requirements in many categories already exist.

Maximum Standards

Now that a picture, however slightly drawn, has been given of what is meant by *Amenity Standards*, it is clear why these provisions should be advisory rather than statutory. Were they statutory, they would of necessity prescribe minimum conditions and could therefore give

no inducement to improve beyond those minimum standards. They must be maximum standards, attainable in different degrees by different localities. But it is obvious that if they are only advisory, machinery must be set up in the national plan to ensure that proper regard should be paid to them.

If a National Planning Authority is established, it would be responsible for giving the broad outline of the national plan to Regional Planning Authorities, for amplification and administration in their own Regions. These Regional Planning Authorities would in turn give more detailed guidance to Local Authorities or Groups of Local Authorities who interpret it for their own localities. It is in the Regions that machinery for observing Amenity Standards should be set up. The existing Local Authorities should be reinforced by Planning Commissions consisting of representatives (if possible of local residents) of all the interests of the locality, including technical experts, whose duty it would be to carry out the considered requirements of the locality, and introduce into their plan as many of the Amenity Standards as are practicable.

Their plan must be submitted to the Regional Planning Authorities who will estimate whether a sufficient standard of Amenity has been introduced, and pass, criticise or reject the Plan upon this consideration only—assuming of course that their own main outline of the national plan had been complied with.

This sketch of the possible machinery of producing post-war physical reconstruction assumes the acceptance of a positive planning policy.

Health and Safety Provisions. It is obvious that such matters must be dealt with on a mandatory basis, and there is no need here even to outline the sort of minimum standards called for.

2. *The Code of Building.* For the establishment of this code, the following recommendations have been summarised:—

I. That there should be one national building code, for the whole country, formulating on a scientific basis, standards of stability, and methods, details and materials of construction.

II. That there should be set up forthwith a National Building Board, which should be an independent authority, with members elected by the technical scientific associations and trades concerned. It should be responsible to Parliament without being incorporated in the machinery of Government Administration, and the duties of this Board should include:—(a) the setting up of a National Building Research Organisation. (b) The formulation, with the advice of the Research Organisation of the National Building Code (referred to in I.) and the modification of that Code as and when necessary.

This code would be obligatory. It would have cross reference to the Health and Safety Provisions of the Code for Living. (For example, the Code for Living would state that the walls of all rooms for human habitation should have "weather resistance Grade I," and the specification for that Grade would be found in the Code of Building.) It would be administered by the Local Authorities in charge of planning and building, and would be applicable universally with no exemptions. It would be based upon standards of performance in many different categories of materials, and could conveniently be graded in accordance with widely varying types of building structure, differentiated broadly by use and function.

3. *The Financial Code.* No detailed recommendations for such a code are made, but a series of propositions and queries connected with building finance from the national aspect have been set forth. The conclusions following these propositions may be left to those more qualified to deal with questions of finance than are architects in their technical capacity. Architects, as specialists, can proceed no further than the twelve tentative propositions and questions that follow:

I. Licences to build must continue in the post-war period.

II. Priorities are therefore involved in the granting of licences, owing to inevitable restrictions of labour and materials.

III. Policy will dictate priorities, and should be based on the general interests of the community as a whole.

IV. It may well be that the priority works licensed will be for those categories of buildings which have shown least profit in the past to private enterprise and have indeed been financed from public or semi-public resources. If the building industry is forced by statute only to build these categories, can it be expected to finance them?

V. If not, the State must be the chief if not the only financial agent for these categories of priority building.

VI. Past experience has shown that if the State or the Local Authority builds with public money it will normally only do so if the land on which its buildings are situated belongs to itself.

VII. It follows that a very great deal of compulsory purchase will be inevitable.

VIII. What are to be the limits of this compulsory purchase? If the land so purchased only coincides with the immediate limits of the projected scheme, will there not be a likelihood of betterment of the surrounding areas (unpurchased) and the consequent instability of ground values leading to unsocial speculation?

IX. As the limits of the schemes cannot be

forecast in the initial stages it would appear wise that an excess of land should come under the scheme of compulsory purchase.

X. Where then shall the limit of compulsory purchase be fixed?

XI. Is it not probable that there must be compulsory purchase of very large tracts of land, some of which shall be sterilised (as far as building development is concerned) and permanently allocated to agriculture; some of which will be required for immediate development; and some of which will in consequence become ripe

for development, in so far as it may be required in the future for completing the scheme?

XII. Will not a completely new financial mechanism be required for carrying out this great scheme of compulsory purchase?

It is clear that the whole of physical reconstruction will ultimately depend upon finance and economics, and if architects are not competent to advise on these matters, some other body competent to do so must produce as clear a picture in this field as architects can produce in the field of structure and planning.

Legislation—The Part of the Architect

REFERENCE has been made earlier to the Town and Country Planning Act of 1932, and it is necessary to glance briefly at the history of the past twenty years or so, and the causes which led to the passing of that Act.

The War of 1914–1918 had left Britain with an accumulated shortage of some two million houses. The advent of the popular motor-car which was cheap to buy, cheap to run, and on the whole very reliable, had demanded, and very quickly obtained, a vast increase of new arterial road making. The cost of building had risen just about three hundred per cent.

Anarchy in Building

The Government attempted to meet the situation by granting loans to Local Authorities and giving subsidies to private owners to encourage house building, but omitted to provide legislation as to how or where the houses were to be placed. The Ground Landlord, who up till then had often been the owner of land with a merely *agricultural* value, now found himself "on velvet," since by the action of the State in thoughtfully providing a well-made road through his property, he found himself possessed of *building* land enormously enhanced in value. Everywhere land was found to be "Ripe for Development"—and develop it did at lightning pace and with devastating effect. The face of the countryside began to assume so hideous an aspect through exploitation and totally uncontrolled planning, that public opinion in due course became deeply stirred. The Government, always sensitive to public opinion, had to take action. They looked round and saw that not all immediate post-war building had been bad. Some Local Authorities, thanks to the employment of competent architects, had produced some really good housing schemes, well built and well laid out. They

therefore prepared the Town and Country Planning Act of 1932 in the hope that all Local Authorities would be guided by the examples before their eyes of the work done by some of their more enlightened brethren.

Thus it will be seen that the 1932 Act was no piece of positive *national* planning, but merely a permissive piece of legislation which granted wide powers to Local Authorities in the hope that they would be wisely and freely used. The Act deals primarily with the utilisation of land and is a complex document. Partly to see that it should be administered properly from its legal aspect, it has been customary that a "Planning Officer," not necessarily a full-time official, should be employed by every Authority. Since this official was not encouraged by them to do any positive planning on his own account, the less-enlightened Local Authorities (and they were many), considered it would be quite good enough to meet the case by appointing either Engineers or Surveyors, a class of officer with whom they were used to deal and to whom they looked for advice on their Councils before the passing of the Act.

The Panel System

From the Nation's point of view this was unsatisfactory, and to assist in considering plans submitted, the Royal Institute of British Architects initiated what is known as the Panel System. This provided the Local Authorities with an Advisory Council (unpaid) formed chiefly from local architects. The R.I.B.A. believes in the value of these Panels, for they have frequently proved that they can do good work, but, unfortunately, the Local Authorities are not obliged to take their advice.

The Act, on the whole, has failed of its purpose of preserving or of improving the face of England,

because Town and Country Planning has hitherto been regarded largely as a matter of roads and communications, and beyond this little consideration has been given to planning. Unless all existing legislation affecting planning is abolished, this Act will remain, and its amendment is desirable. The R.I.B.A. has made the following proposals, framed in accordance with the Act:—

(1) That the Planning Officer must necessarily be a full-time official of a Local Authority and that he should preferably be an Architect.

(2) That the Panels should be made official, and that it becomes an obligation for the Local Authorities to act upon their advice.

(3) That if the Planning Officer is an Architect and the planning scheme is small, a consultant may be unnecessary; in all other town planning schemes one or more architect consultants should be appointed. In collaboration with technical experts, great numbers of architects are well qualified to act as town-planning consultants.

The Scale of Responsibility

IT may be asked, why architects are qualified to assume such wide responsibilities in the service of the community. The answer is that architects are the only men trained to plan and design all kinds of buildings.

There have been architects from the earliest times. The first were probably master masons, devoting perhaps a whole lifetime to work on one great building. Such men have organised the growth of fine buildings in all ages. As demands on their services grew with the spread of civilisation, these men had less time for handicraft: they had to give more attention to directing others, and to organising an increasing number of building jobs. From the narrow groove of one particular craft, these early architects broadened their work until they found themselves discussing matters of technique, art and business far outside the immediate problem of building. In every age architects have met the needs of those who sought their advice. They cannot build houses and offer them for sale as painters offer pictures: they can only make their contribution through the medium of a "client," who may be the State, a municipality or council, a company or a private person.

As increased demands in the past forced architects to broaden their scope, so in more recent times the use of fresh materials and the possibilities offered by scientific discoveries led to further broadening. The original craftsmen or artists have grown to be scientific business men as well.

In the great architects an understanding of science, art and business enabled them to produce masterpieces of building which satisfy and delight architects and laymen alike, though the latter may not be able to say just why.

Architects formerly learnt their trade as apprentices to master masons and, much later, as pupils in the offices of senior architects, often supplemented by instruction at evening classes where available, and by travel in this country and

abroad for the luckier ones. The pupil traced his master's drawings and watched buildings grow on the site. If this master was a good architect, with the ability to impart his knowledge to others, the pupil would learn something of planning and design, until eventually he felt ready to start practice on his own.

The system was good in that pupils were from the start in contact with real problems instead of make-believe, but the quality and quantity of their teacher's instruction in planning varied widely. A busy architect might be short of time, and an idle one short of ability. One architect might design nothing but houses and another nothing but hotels, so that the pupil's experience in planning might be limited. Pupils in consequence depended largely on luck: and the number of places available in architects' offices was not equal to the demand.

Nowadays architectural students are mostly trained in schools of architecture where all branches of the profession are studied; here the student can match himself with his contemporaries and take examinations governed by a central authority, whose duty it is to maintain a standard of education: the public are thus assured of a certain proficiency when employing qualified architects. No man may now call himself architect without satisfying the central authority (Architects' Registration Council of the United Kingdom) of his ability, and until after having served for a year in a practising architect's office, and there gained experience to his principal's satisfaction. In this way the title "architect" has come to resemble that of doctor. People needing a doctor's help are usually aware of such need, but few know when they might to their own advantage seek an architect's advice. And this is because they do not know exactly what an architect is for—what does he do? A builder puts up buildings—*where does the architect come in?*

Where the Architect Begins

An architect starts a job by noting all his client's requirements, whether for church, school, hospital, factory or house. By question and answer the architect must extract every single idea connected with the job from his client's mind, however irrelevant some of them may seem in the early stages. The architect, in fact, must get to know his client as a friend, because without mutual trust and collaboration neither can give of his best to the project in hand. (In the rebuilding of Britain, the nation will be the architect's client.)

Only by close study of his client and his special—possibly unusual—requirements will the architect be able to produce a building which fully and successfully solves the problem set. It is the architect's first care to mould his client's wants into a suitable building, using his professional skill to suggest improvements and to allow for future developments which the layman cannot visualise. The architect must have vision to read his client's mind and then the ability to interpret it in three dimensions. He should also be a town planner and something of a sociologist. The architect should be consulted before a site is chosen because he is better qualified than a layman to visualise its possibilities.

To design a building to the client's satisfaction may need countless sketches and perhaps models, because technical plans and sections are not always easily understood by laymen. (It is not often realised by laymen that the time spent on drawings may equal the time required for actual building.) With the site chosen and the design agreed, the architect sends detailed drawings and a list of all materials and their use to several known builders of equal standing for tendering, the lowest tender being generally accepted. Client and builder then sign a contract drawn up by the architect, which states how the job is to be managed and paid for. In organising the job under the terms of the contract, the architect adds yet another role to his repertoire. He is now prepared to act as a judge should any dispute arise. Finally the architect acts as accountant in checking the bill.

Practising architects may roughly be divided into two classes: 1. In private practice, maintaining their own staffs and working on commission. 2. Salaried in the service of Government or Local Authorities.

It has already been indicated how architects in private practice might usefully assist as consultants for Town Planning Schemes; in addition, they are equipped to render immediate service in the execution of such building work as is allotted to them, which would be undertaken in their own offices and by their own staff.

In the architectural services which will be needed in Reconstruction, the Official Architect will play an important part. His appointment, unfortunately, is not a statutory one, and his position is affected by this fact. It should be made a statutory obligation on the part of Local Authorities to have an Official Architect as a first-class officer. In consequence of their position they are able to exercise an important influence in the interests of good architecture, and to keep this issue constantly in the minds of their employing Authorities.

The control of architectural design, arrangements for the preservation of buildings of architectural and historical interest, and of related amenities should in all cases be put in the hands of architects. Design is an architectural matter. *It is the cardinal principle in an architect's training.* It is not only a matter of convenient or pleasing shapes, it means also care for mass, line and coherence, for spatial effects, for colour and texture, for scale and proportion, for light and shade.

There will, of course, be limiting factors. These will be welcomed by all good designers. There must be statutory control through planning which limits use, access, density, height, frontage lines and, to a certain extent, appearance; there must also be limitations of material, structure, building labour, safety and cost. Creative design may be stimulated or weakened either by a tightening or a relaxation of these controls.

Where the Problem Ends

No Government Department can improve the general level of building design throughout the country, except by example, but it can obviously facilitate the more regular, more co-ordinated and more effective use of the designer—whether he be Architect or Engineer—and endeavour to ensure that right use is made of every opportunity provided. Given the programme, and given the building machine, the architectural problem centres on the designer.

Architecture and the Building Industry

ARCHITECTURE is a science arising out of many other sciences, and adorned with much and varied learning; by the help of which a judgment is formed of those works which are the result of other arts. Practice and theory are its parents. Practice is the frequent and continued contemplation of the mode of executing any given work, or of the mere operation of the hands, for the conversion of the material in the best and readiest way. Theory is the result of that reasoning which demonstrates and explains that the material wrought has been so converted as to answer the end proposed."

That view of architecture was expressed some two thousand years ago by Marcus Vitruvius Pollio in the first chapter of the first of his ten books on the subject. It is valid to-day, although we live in a scientific machine age and Vitruvius wrote and dedicated his books to an Emperor who ruled a vast, industrialised slave state. The architect in the twentieth century, as in the first, conceives building in all its phases, from the broadest planning to the most minute detail of individual items of equipment. The builder carries out the architect's designs, through the operatives of the industry, obtaining material from manufacturers and suppliers. In the course of these operations the other professions engaged—quantity surveyors, engineers, specialists of all kinds—assist in the administrative and technical branches demanded by modern building.

Understanding of National Needs

The architect in his professional capacity is a part of the building industrial machinery; he is also the main link between the building industry and the public which it serves, for he transmutes demands and requirements for plan and structure into tangible form for public service and enjoyment. The architect, because of his special training, is in a position to apprehend the broad needs of the country in many forms of construction; and he is in close contact with the machinery for satisfying those needs. His habit of designing makes him realise that good arrangement is the product of an appreciation of order and harmony, themselves an expression of excellence in organisation. The architect can, therefore, assist in the effort of the building industry to serve the nation as a whole, seeing as he does the difficulties of both demand and supply, aware of strength and weaknesses in the

machinery for relating them; and yet—in his professional capacity without bias or interest beyond that of earning a livelihood and helping to perfect the organisation which will make building an even more efficient and serviceable aid to a better life for everyone in the community.

Long before the war, the architectural profession, through its recognised organisations and channels, took a creative interest in the relations between the Government and the building industry. It began, in fact, some twelve years ago to realise increasingly its role as an active part of the building industry, and the Royal Institute of British Architects was one of the founder members of the Building Industries National Council (B.I.N.C.) which was then inaugurated to enable the whole industry to speak with one voice on all matters of common service to its members.

The Industry and the Nation

At the time of the world depression, the British Government began an economy campaign in building, the effects of which were disastrous. The B.I.N.C., realising the role which building activity plays in the nation's economic life, opposed this policy strenuously, and was largely instrumental in getting it revoked. Since then, convinced by the grim experience of those days, it has produced a report on long-term public works policy, proposing that programmes of public works by National and Local Authorities should as far as possible be reserved for times when other building work has slackened. This policy was accepted and put into operation in May 1939 by Sir Kingsley Wood, who was then Minister of Health, but the war prevented it from proving its value as a factor in securing economic stability.

The place of the building industry in war-time, and the manner in which its services are used by government, has been considered by the architect. The industry had to be organised to give its strength and skill to aiding the war effort; but it had also to prepare for its peace-time task of reconstruction. Good organisation for war could be maintained for work in peace. The Royal Institute of British Architects concluded that, firstly, the building industry must become an increasingly efficient machine for national service, and, secondly, that under war conditions of stringent control, it could not serve the nation efficiently unless its existing capacity was properly

used. It was essential not only for the industry to put its house in order, but for the government to do likewise.

War-time Programme

In common with other members of the industry, the R.I.B.A. saw defects in the war-time building activities of the government. For example, there was competition by various departments for the industry's services, and consequent overlapping; also neglect of certain sections, such as builders of recognised repute and capacity, in favour of others with far less title to recognition; misuse of materials, such as timber; failure to draw up a programme of demand related to capacity; failure to impose contracts with proper safeguard; and even neglect of elementary supervision. Professional technicians, such as architects, were almost entirely eliminated from the programme, and work was carried out under conditions that were occasionally chaotic.

Such failures could only be attributed to lack of knowledge and ineffective governmental machinery. Realising this, the President of the Royal Institute, the late Mr. E. Stanley Hall, wrote to *The Times* on December 29, 1939, urging the formation of a Ministry of Building to plan and co-ordinate all the building needs of the country. This Ministry is now in being.

The Ministry did not at first realise that it must consider its relations with the building industry as a whole and abandon the method of treating with each section of it as a separate entity, nor did it provide the information which would enable the industry to mobilise to the full its capacities. It was in the hope that the Government would attempt to improve its own principles and methods for dealing with building, that the Reconstruction Committee of the Royal Institute initiated one of several parallel efforts to improve the machinery and methods of the building industry itself. It was fully realised that for the moment only broad principles could be laid down, and that even these must be studied and modified in consultation with all sections of the industry, through the existing machinery in the Building Industries National Council. It was hoped that eventually the role of every section of the industry would be clarified and defined, that overlapping would disappear, and that steps to achieve these aims would be taken at once,

and finally, that the Government would institute a survey of the capacities of the industry in man power, materials, and professional services, together with a parallel survey of the work envisaged in the Government programme of reconstruction.

All questions of building methods, such as the use of standard types, temporary or permanent buildings for certain needs, factory-built or pre-fabricated dwellings, can only be solved satisfactorily after the hard work of a survey has been faced. The survey of the site precedes all building work; reconstruction cannot proceed without its own survey of demand and supply. The R.I.B.A. suggests that the output and capacity of all sections of the industry might be represented in a simplified form, such as a "unit of work." This "unit of work" would mean so much material, so many man hours, so much professional and other services involved. Building needs might also be assessed as demanding so many "units of work" and in this way needs and capacities could be related. The unit must be all embracing. It is bad organisation to have in one place abundant materials and no labour, in another the reverse, and in a third materials and labour, but no direction.

Compact Organisation

Before these "units of work" can be determined, the component parts of the industry must be defined, thus:—(1) Professional group; (2) Employing group; (3) Operatives group; (4) Manufacturing and Distributing group. The architects, surveyors, and engineers in section (1) would define their respective functions, and aim at simplifying procedure in such technical matters as contracts, costing, supervision, and so forth. Employers are recommended to achieve greater measure of common representation on matters of common concern, and employees of the building material manufacturers should have their say in questions affecting labour in building operations. The manufacturers should eliminate redundancy and competition which might increase cost of materials without a corresponding enhancement of their quality. Education and training for crafts and trades should be brought into closer touch with building industrial development.

The architect is directly or indirectly concerned in all these matters; for they are part of the extensive machinery for the physical execution of building operations.

